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## ORIGINATION FORM

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### Proposed Revisions to a Standard Plans Index

(Please provide all information — Incomplete forms will be returned)

**Contact Information:**

Date: January 18, 2022

Originator: Joshua Turley/Jose Armenteros

Phone: (850) 414-4475

Email: [Joshua.turley@dot.state.fl.us](mailto:Joshua.turley@dot.state.fl.us)

**Standard Plans:**

Index Number: 641-010

Sheet Number (s): All

Index Title: Concrete Poles

**Summary of the changes:**

All Sheets: Renumbered

Sheet 1: Change Note 3.A reference to Class V Special to Class V.

Sheet 5: Added new sheet for a new 16 ft pole version P-IID.

**Commentary / Background:**

SMO has proposed to remove Class V Special Concrete as an option from the Standard Specifications and therefore the Standard Plans must be updated.

This 16-foot pole was requested by Districts to accommodate project-specific service point designs. Electrical service point details for a 16-foot pole are under consideration for a future Standard Plans publication.

**Other Affected Offices / Documents: (Provide name of person contacted)**

- | Yes                                 | No                                  |   |
|-------------------------------------|-------------------------------------|---|
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Other Standard Plans –                      |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | FDOT Design Manual –                        |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Basis of Estimates Manual – Ryan Gray       |
| <input checked="" type="checkbox"/> | <input type="checkbox"/>            | Standard Specifications – Daniel Strickland |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Approved Product List –                     |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Construction –                              |
| <input type="checkbox"/>            | <input checked="" type="checkbox"/> | Maintenance –                               |

**Origination Package Includes:** (Submit package to Rick Jenkins)

- | Yes                                 | N/A                      |   |
|-------------------------------------|--------------------------|---|
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Redline Mark-ups                                    |
| <input checked="" type="checkbox"/> | <input type="checkbox"/> | Revised or Proposed Standard Plan Instruction (SPI) |
| <input type="checkbox"/>            | <input type="checkbox"/> | Other Support Documents                             |

**Implementation:**

- |                                     |                                  |
|-------------------------------------|----------------------------------|
| <input type="checkbox"/>            | Design Bulletin (Interim)        |
| <input type="checkbox"/>            | DCE Memo                         |
| <input type="checkbox"/>            | Program Mgmt. Bulletin           |
| <input checked="" type="checkbox"/> | FY-Standard Plans (Next Release) |

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Contact the Roadway Design Office for assistance in completing this form

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Email to: Rick Jenkins [rick.jenkins@dot.state.fl.us](mailto:rick.jenkins@dot.state.fl.us) and Darren Martin [darren.martin@dot.state.fl.us](mailto:darren.martin@dot.state.fl.us)

**GENERAL NOTES:**

1. Work these Index Sheets with the Strain Pole Schedule in the Plans. See Index 634-001 for corresponding signal cable and span wire installation details.

2. Shop Drawings:

This Index is considered fully detailed and no shop drawing are necessary. Submit shop drawings only for minor modifications not detailed in the Plans.

3. Materials:

- A. Concrete: Deleted *Class V Special with 4 ksi minimum strength at transfer or Class VI with 6.5 ksi minimum strength at transfer Specification 641*
- B. Prestress Strands & Spiral Reinforcing: *Specification 641*
- C. Hand and coupler cover plates: *Non-corrosive material*
- D. Screws: *Round headed, chrome plated*

4. Fabrication:

- A. Pole Total Taper shown is for pole width, strands, reinforcing and void (0.081 in/ft per face).
- B. Concrete Cover: 1" minimum.
- C. Spiral Reinforcing: Place as shown, and add one turn for splices and two turns at both the tip and butt ends of the pole.
- D. The design dimensions for Front Face (FF) and Back Face (BF) of the poles may vary transversely from the section shown by  $\pm 1/4"$  to assist with removal from forms. Balance addition and subtraction of the face widths to maintain section areas shown.
- E. Tie ground wires to the interior of reinforcing steel to prevent displacement during concreting operations.
- F. Cut the tip end of the prestressed strand either first or simultaneously with the butt end.
- G. Provide cover plates and screws for hand hole and couplers. Attach cover plates to the poles using lead anchors or embedded threaded inserts.
- H. Provide Aluminum Identification Tag on the pole with the following information:
  - a. Financial Project ID.
  - b. Pole Manufacturer
  - c. Standard Pole Type Number
  - d. Pole Length (L)

5. Support Points:

Support Points shown may vary within a tolerance of  $\pm 3"$ .

Horizontal Pole Support Points shown are for strand release, storage, handling and transport of the horizontal pole. Keep Back Face oriented downward until final erection.

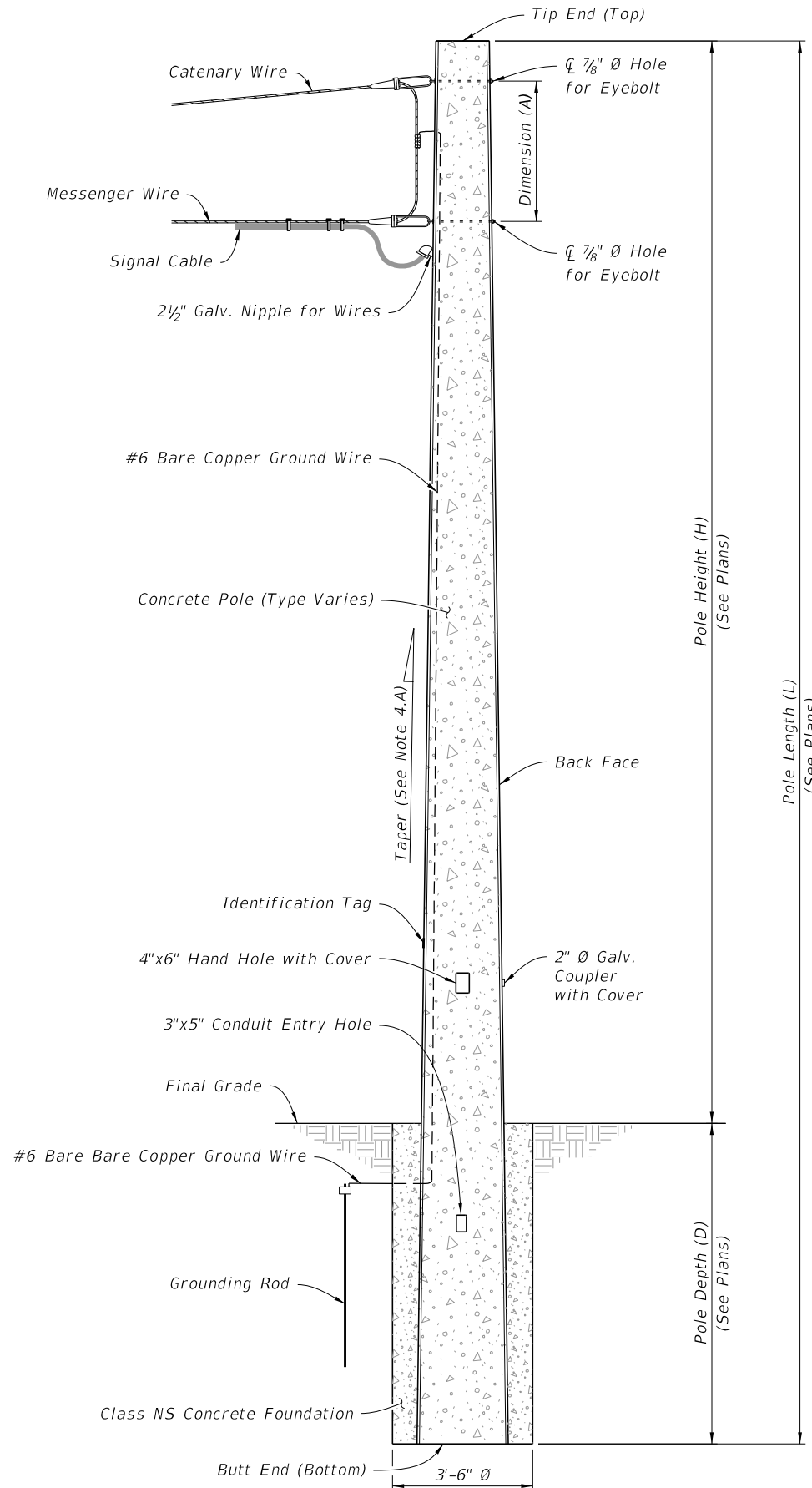
6. Two point attachment: Provide an eye bolt hole for the messenger wire.

7. Tether Wire: When required, field-drill the eyebolt hole prior to installation.

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3	Service Pole - Type P-IIB (36 Ft.)
4	Pedestal Pole - Type P-IIC (12 Ft.)
5	Pole - Type P-III
6	Strain Pole - Type P-IV
7	Strain Pole - Type P-V
8	Strain Pole - Type P-VI
9	Strain Pole - Type P-VII
10	Strain Pole - Type P-VIII

UPDATED



**CONCRETE POLE ASSEMBLY**  
(Type P-VII Shown, Others Similar)

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9/22/2021

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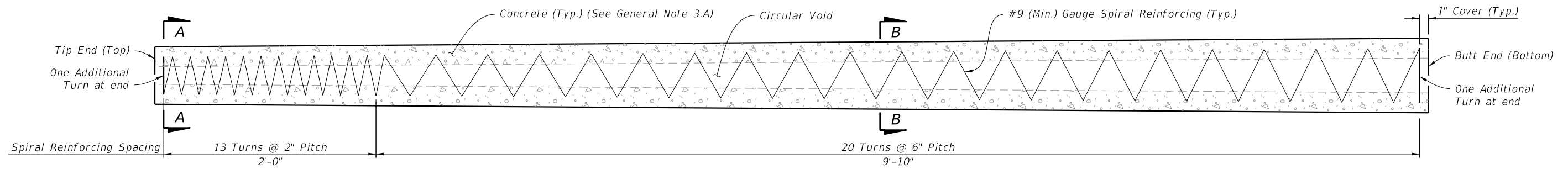


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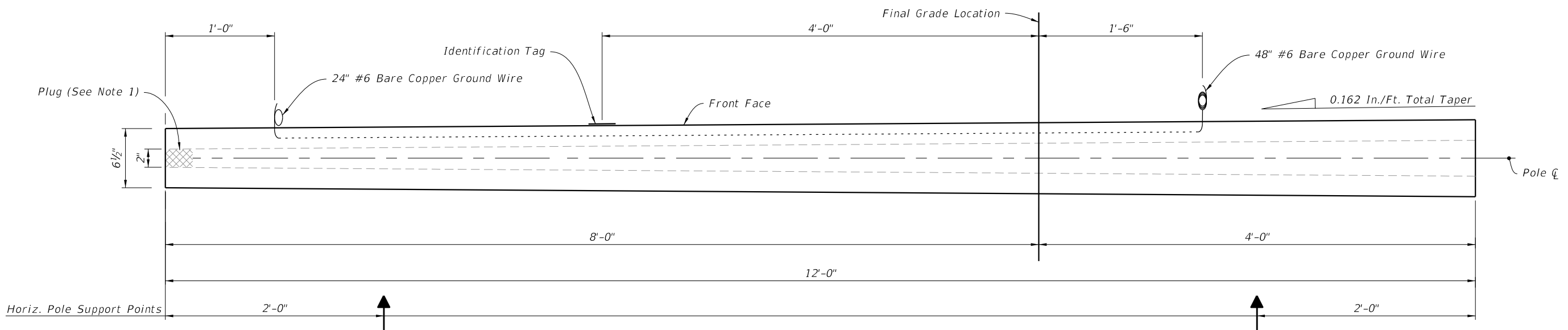
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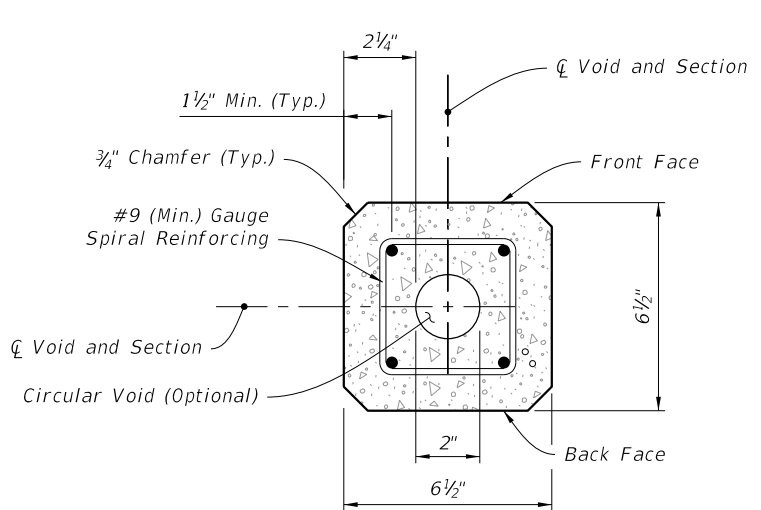
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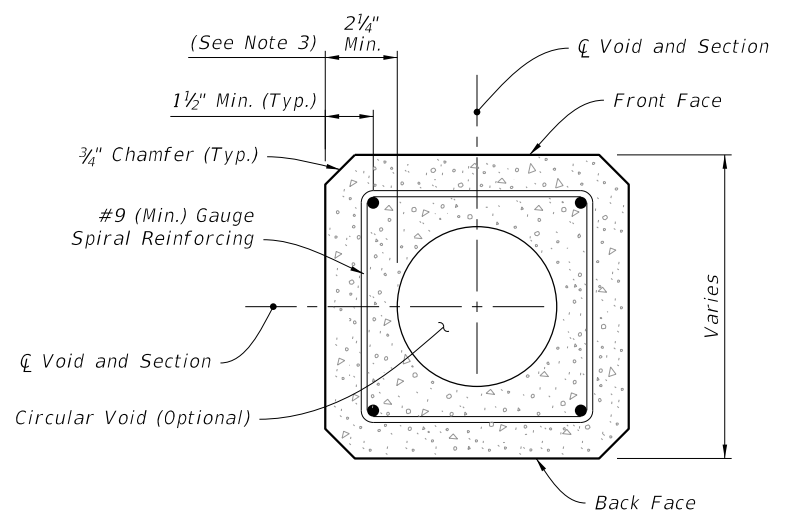
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(Strands and Fixtures Not Shown)



**POLE ELEVATION**  
(Strands and Reinforcing Not Shown)



**SECTION A-A - (Tip End)**



**SECTION B-B (Typical Square Section)**

**NOTES:**

1. Provide a minimum 3" concrete plug at the Tip End.
2. For final erection, tilt pole upright with single point attachment located a distance of 4 feet from the Tip End.
3. Dimension may vary from 2 1/4" to 3 1/2" to accommodate smaller radius of optional stepped (PVC) void. The minimum void diameter is 2".
4. Strands shown are continuous from Tip End to Butt End.
5. Strands are not shown in the elevation views for clarity.

**LEGEND:**

- Prestressed Strand:  
0.5 in. ~ 24 kips before transfer or  
0.375 in. ~ 14 kips before transfer (4 strands total)

Renumbered

**SERVICE POLE - TYPE P-IIA (12 Ft.)**

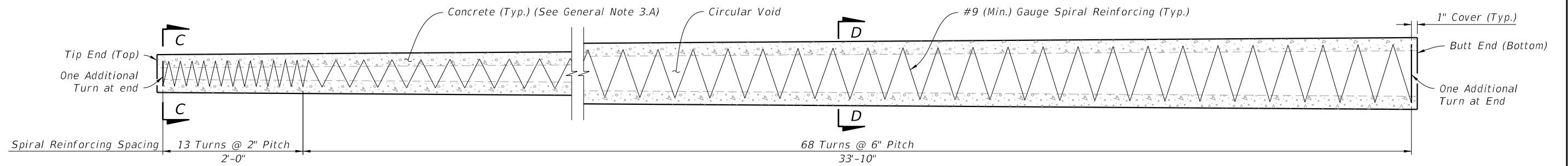
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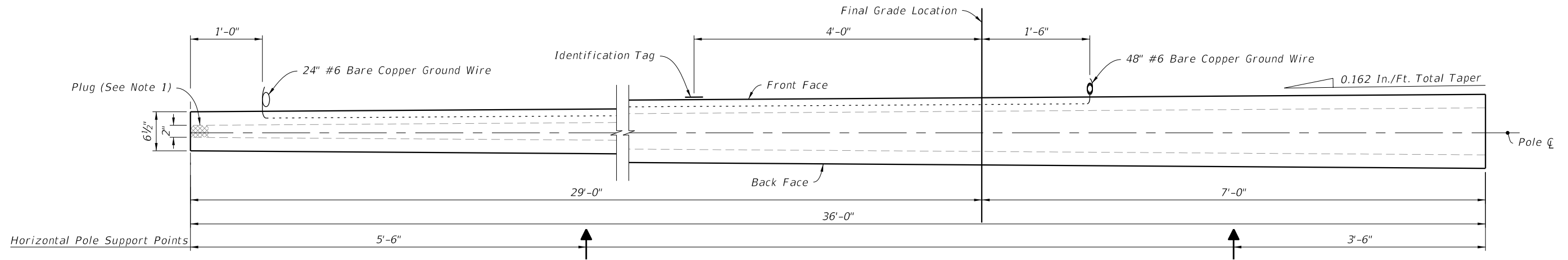
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CONCRETE POLES

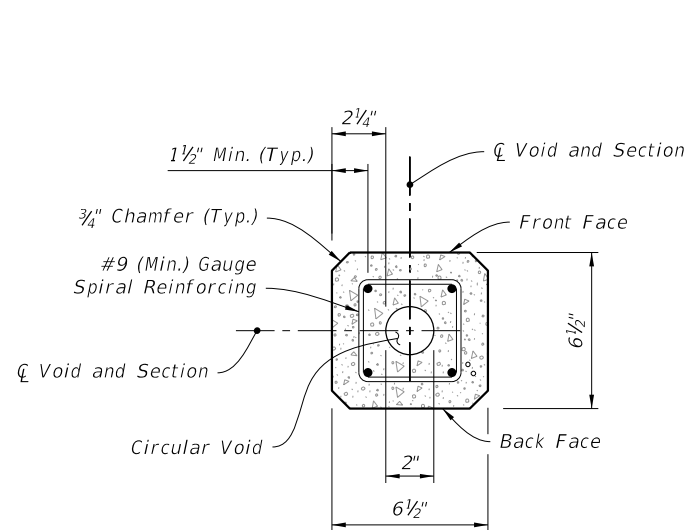
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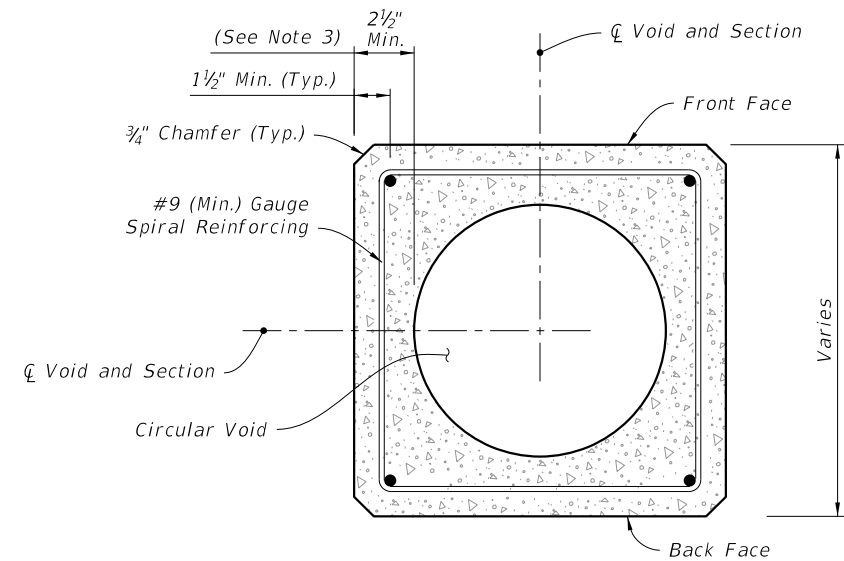
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(Strands and Fixtures Not Shown)



**POLE ELEVATION**  
(Strands and Reinforcing Not Shown)



**SECTION C-C (Tip End)**



**SECTION D-D (Typical Square Section)**

**NOTES:**

1. Provide a minimum 3" concrete plug at the Tip End.
2. For final erection, tilt pole upright with single point attachment located a distance of 10 feet from the Tip End.
3. Dimension may vary from 2 1/4" to 3 1/2" to accommodate smaller radius of optional stepped (PVC) void. The minimum void diameter is 2".
4. Strands shown are continuous from Tip End to Butt End.
5. Strands are not shown in the elevation views for clarity.

**LEGEND:**

- Prestressed Strand:  
0.5 in. ~ 24 kips before transfer or  
0.375 in. ~ 14 kips before transfer  
(4 strands total)

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**SERVICE POLE TYPE P-IIB (36 Ft.)**

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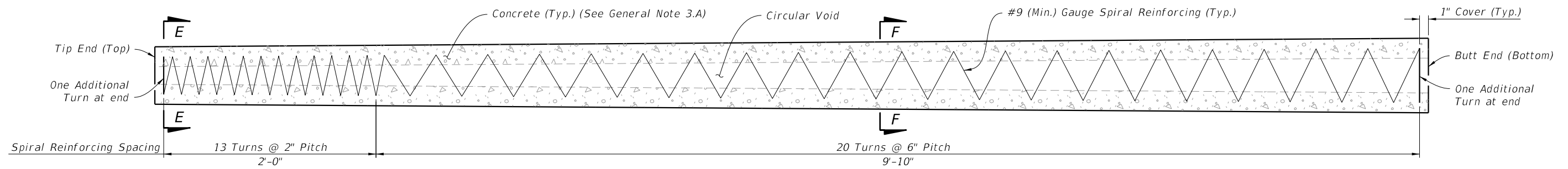


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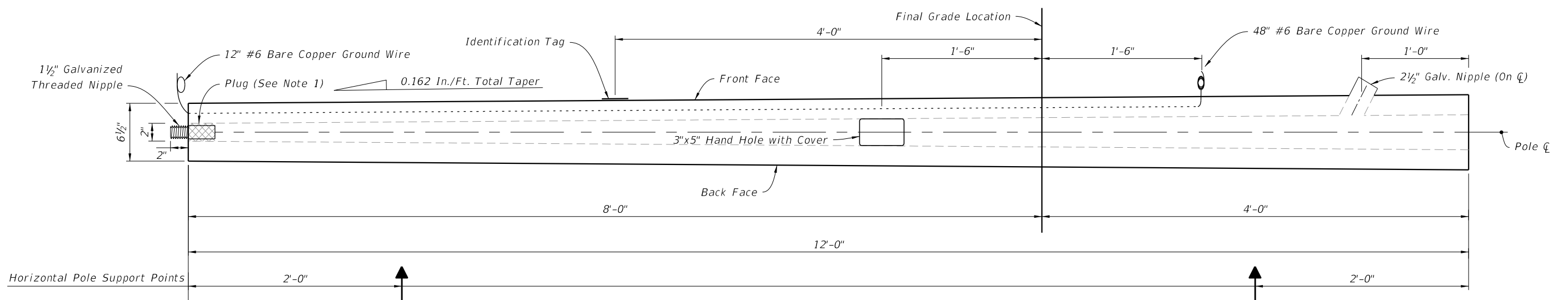
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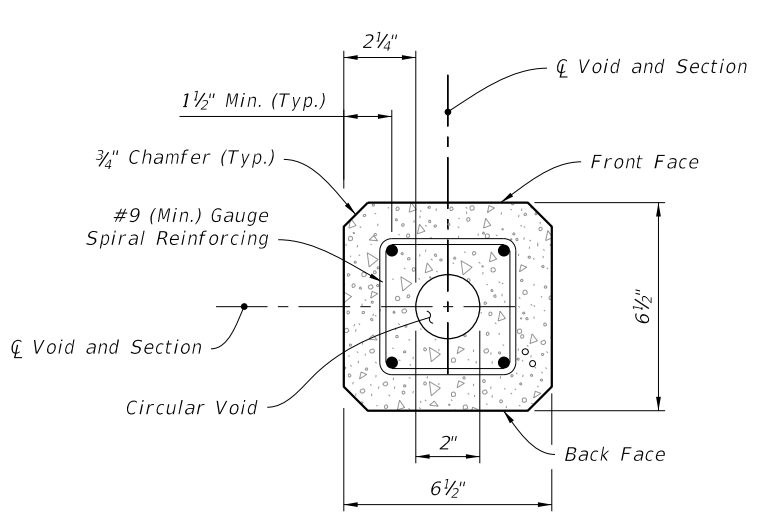
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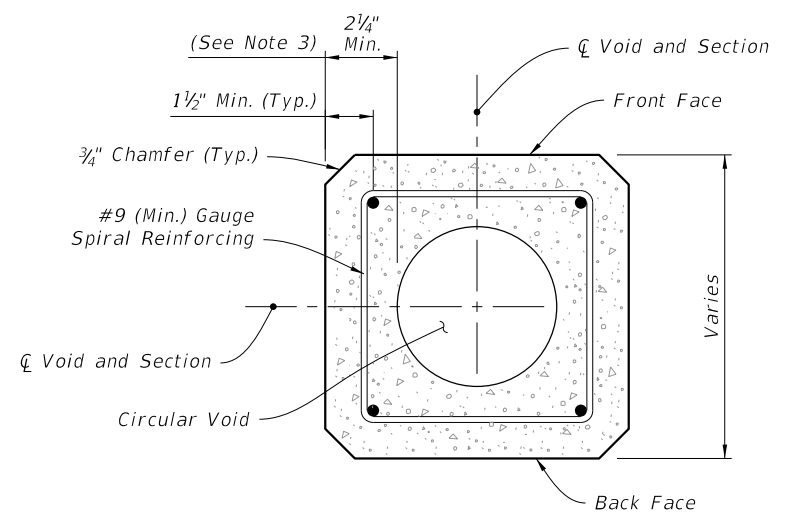
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(Strands, Holes, and Fixtures Not Shown)



**POLE ELEVATION**  
(Strands and Reinforcing Not Shown)



**SECTION E-E (Tip End)**



**SECTION F-F (Typical Square Section)**

**NOTES:**

1. Provide a minimum 3" concrete plug at the Tip End.
2. For final erection, tilt pole upright with single point attachment located a distance of 4 feet from the Tip End.
3. Dimension may vary from 2 1/4" to 3 1/2" to accommodate smaller radius of optional stepped (PVC) void. The minimum void diameter is 2".
4. Strands shown are continuous from Tip End to Butt End.
5. Strands are not shown in the elevation views for clarity.

**LEGEND:**

- Prestressed Strand:  
0.5 in. ~ 24 kips before transfer or  
0.375 in. ~ 14 kips before transfer  
(4 strands total)

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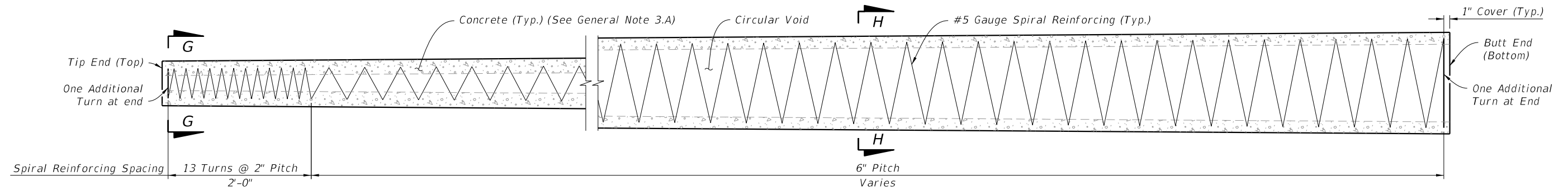
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**CONCRETE POLES**

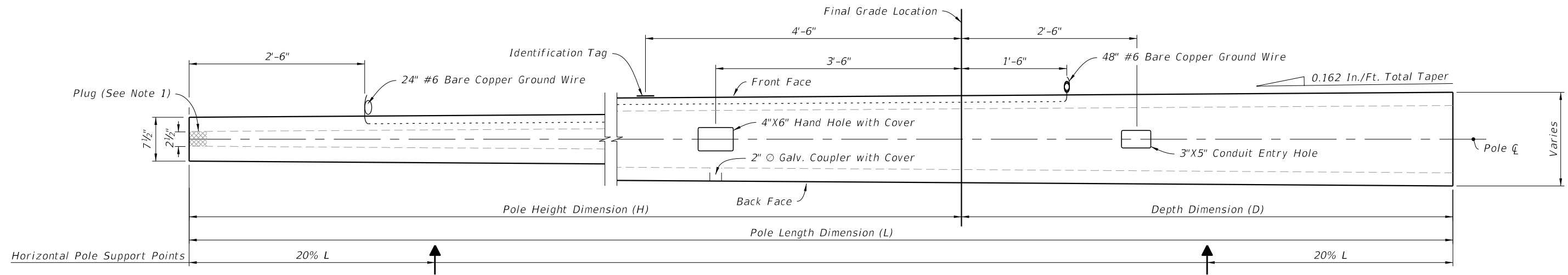
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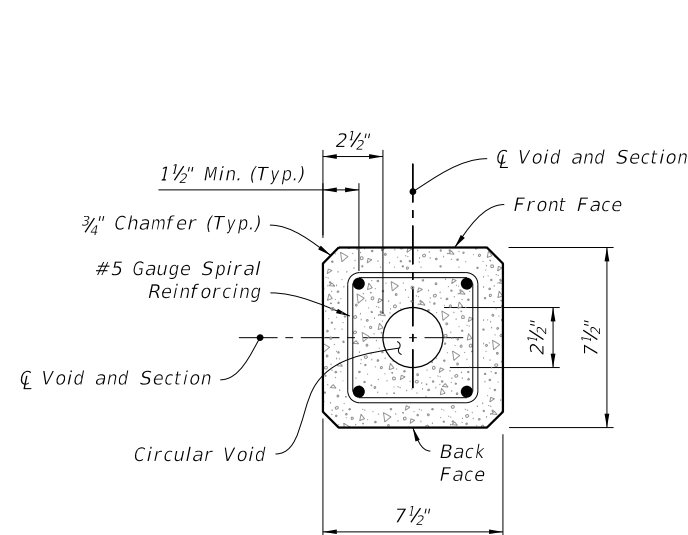
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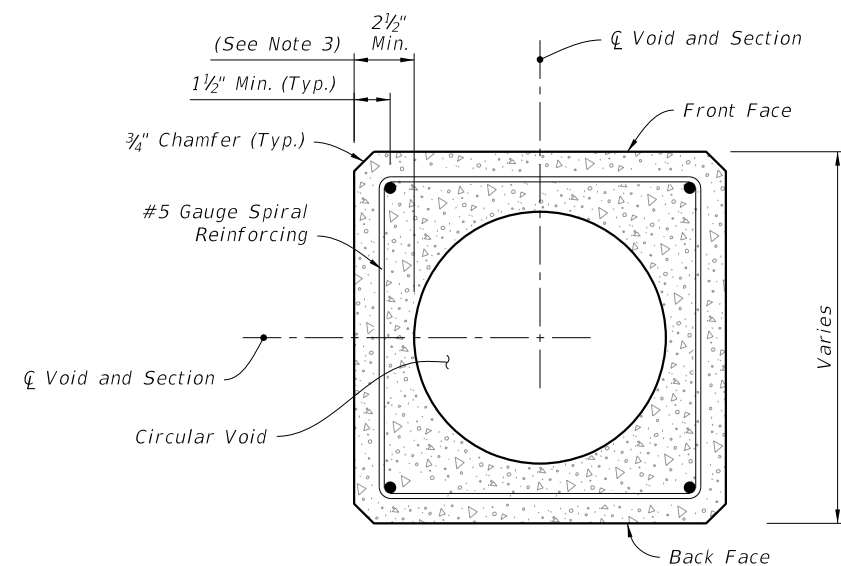
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**POLE ELEVATION**  
(Strands and Reinforcing Not Shown)



**SECTION G-G (Tip End)**



**SECTION H-H (Typical Square Section)**

**NOTES:**

1. Provide a minimum 3" concrete plug at the Tip End.
2. For final erection, tilt pole upright with single point attachment located a distance of 33% L from the Tip End.
3. Dimension may vary from 2 1/2" to 3 3/4" to accommodate smaller radius of optional stepped (PVC) void. The minimum void diameter is 2 1/2".
4. Strands shown are continuous from Tip End to Butt End.
5. Strands are not shown in the elevation views for clarity.

**LEGEND:**

- Prestressed Strand:  
0.5 in. ~ 31 kips before transfer (4 strands total)

Renumbered  
**POLE TYPE P-III**

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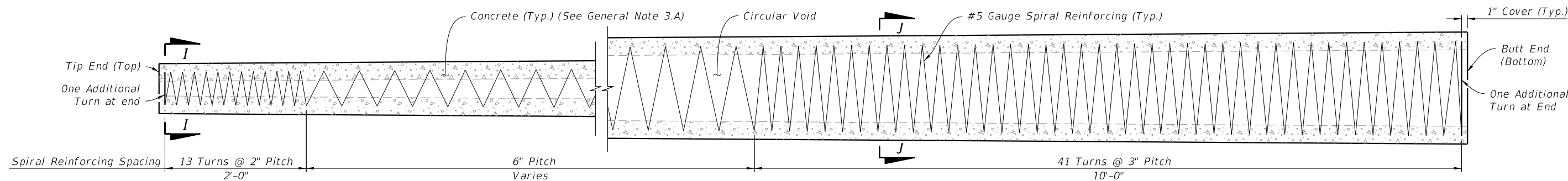
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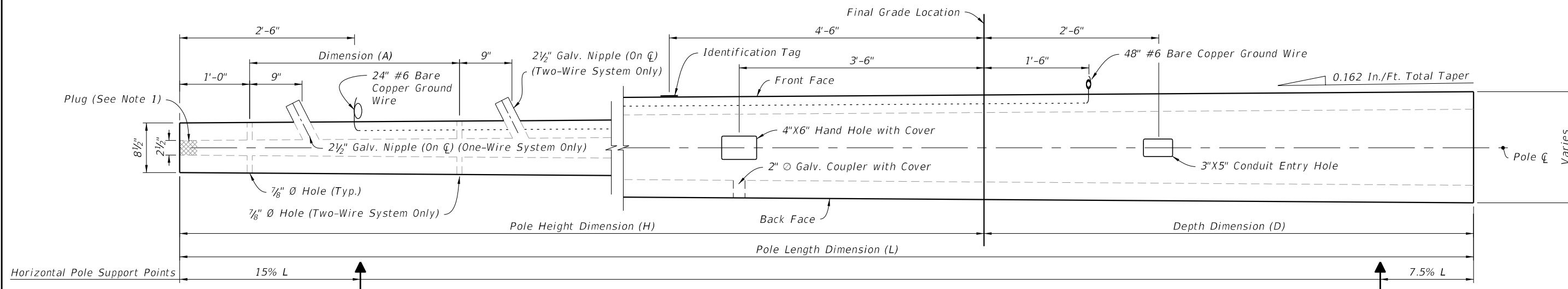
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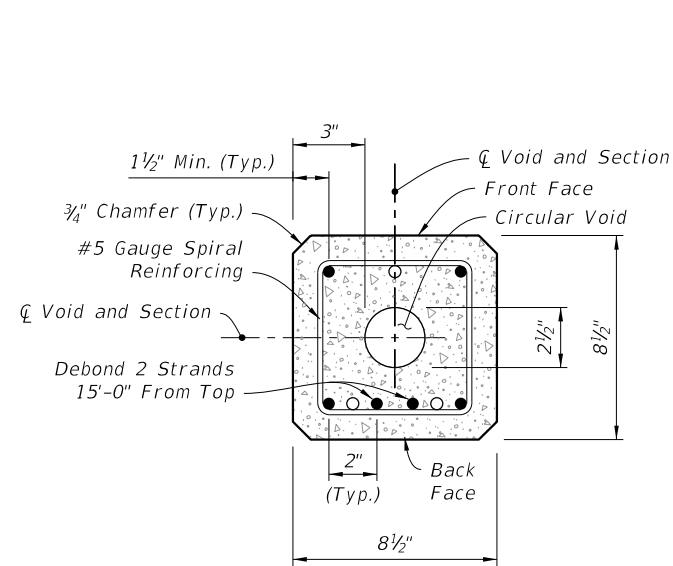
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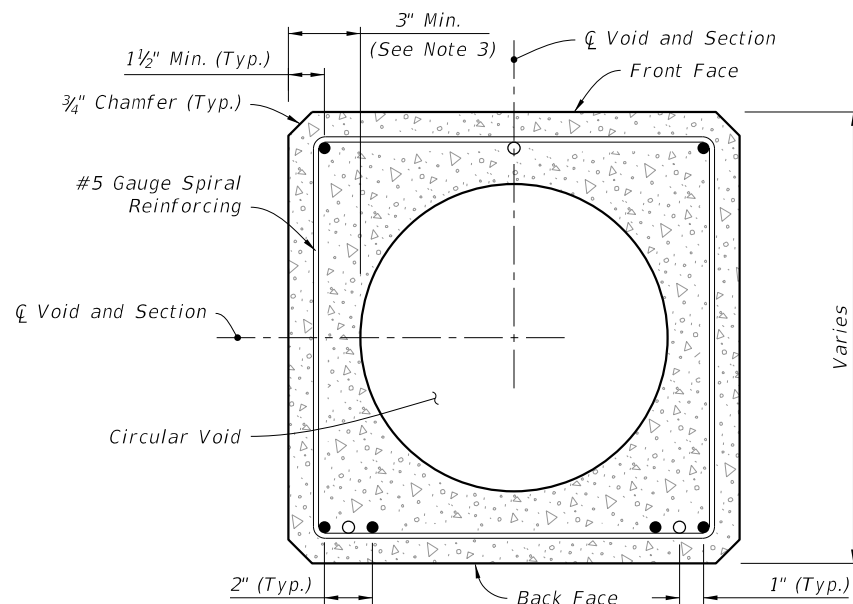
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(Strands, Holes and Fixtures Not Shown)



**POLE ELEVATION**  
(Strands and Reinforcing Not Shown)



**SECTION I-I (Tip End)**



**SECTION J-J (Typical Square Section)**

**NOTES:**

1. Provide a minimum 3" concrete plug at the Tip End.
2. For final erection, tilt pole upright with single point attachment located a distance of 20% L from the Tip End.
3. Dimension may vary from 3" to 4 1/4" to accommodate smaller radius of optional stepped (PVC) void. The minimum void diameter is 2 1/2".
4. Strands shown are continuous from Tip End to Butt End.
5. Strands are not shown in the elevation views for clarity.

**LEGEND:**

- Prestressed Strand:  
0.5 in. ~ 31 kips before transfer (6 strands total)
- Dormant Strand:  
0.5 in. (3 strands total) One 24" splice allowed per strand

Renumbered  
**STRAIN POLE TYPE P-IV**

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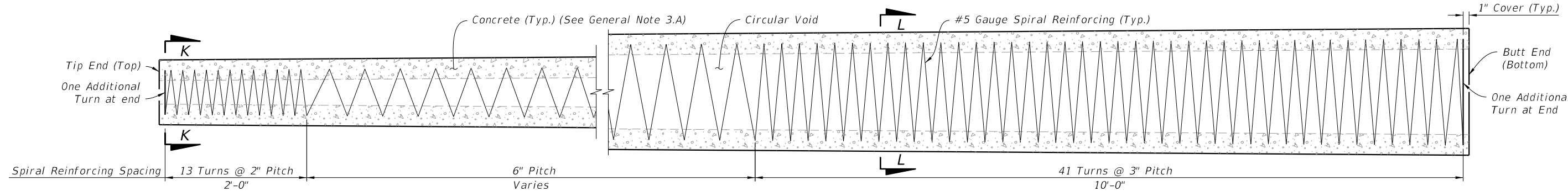
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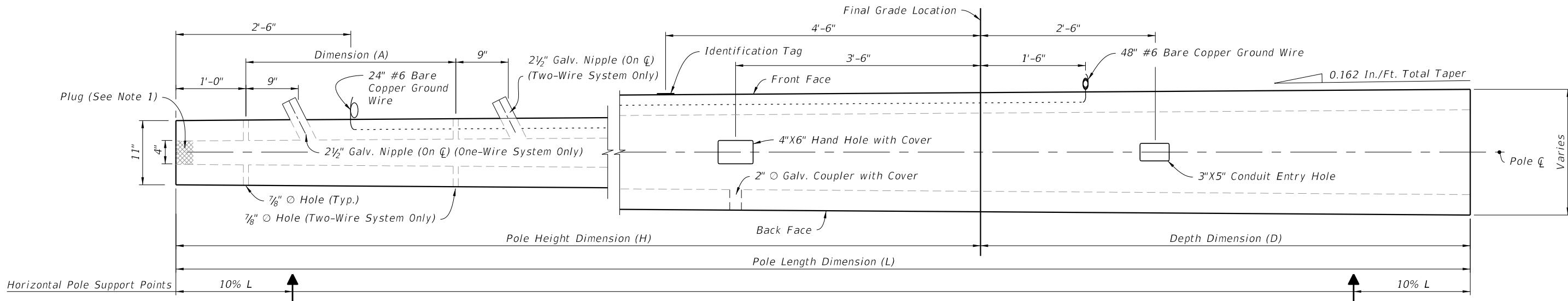
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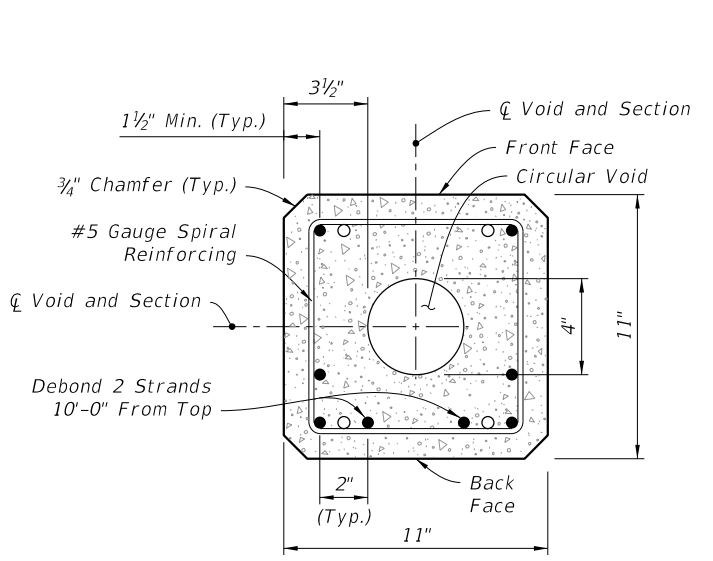




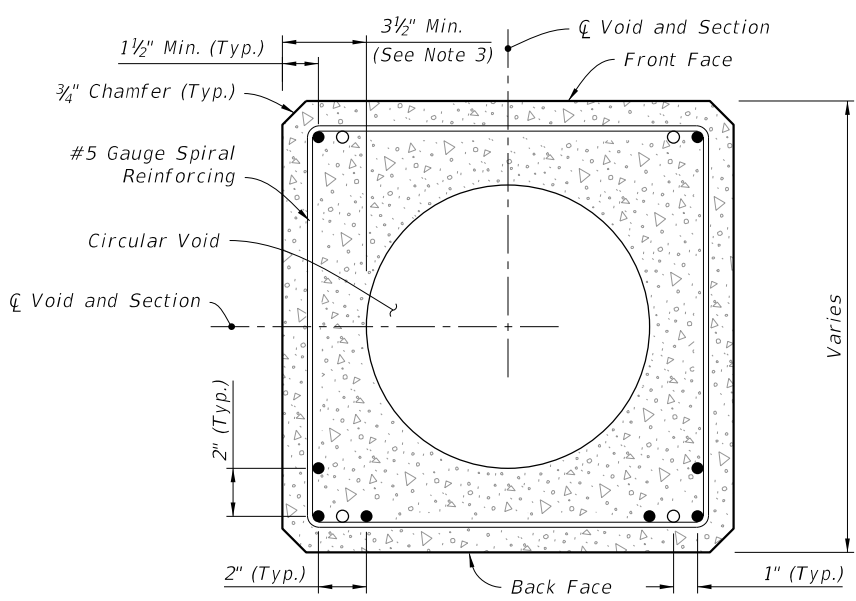
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(Strands, Holes, and Fixtures Not Shown)



**POLE ELEVATION**  
(Strands and Reinforcing Not Shown)



**SECTION K-K (Tip End)**



**SECTION L-L (Typical Square Section)**

**NOTES:**

1. Provide a minimum 3" concrete plug at the Tip End.
2. For final erection, tilt pole upright with single point attachment located a distance of 12.5% L from the Tip End.
3. Dimension may vary from 3 1/2" to 4 3/4" to accommodate smaller radius of optional stepped (PVC) void. The minimum void diameter is 4".
4. Strands shown are continuous from Tip End to Butt End.
5. Strands are not shown in the elevation views for clarity.

**LEGEND:**

- Prestressed Strand:  
0.5 in. ~ 31 kips before transfer (8 strands total)
- Dormant Strand:  
0.5 in. (4 strands total) One 24" splice allowed per strand

Renumbered

**STRAIN POLE TYPE P-V**

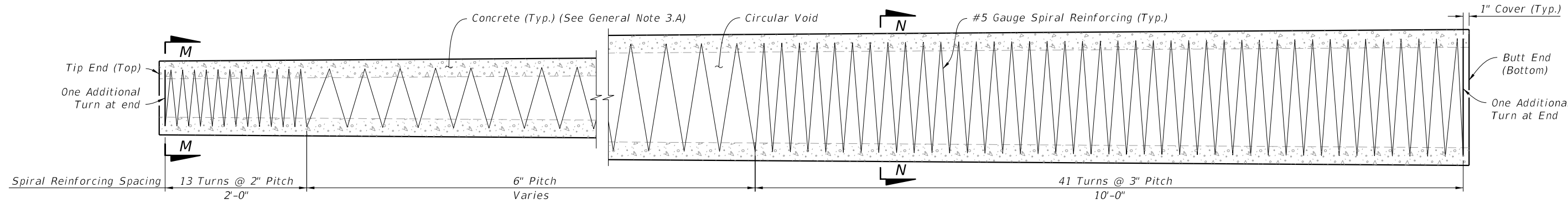
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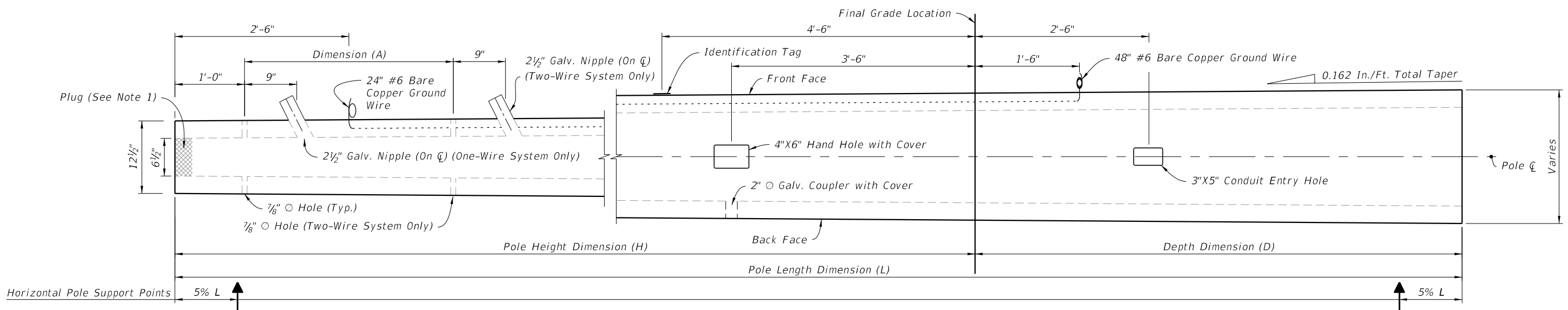
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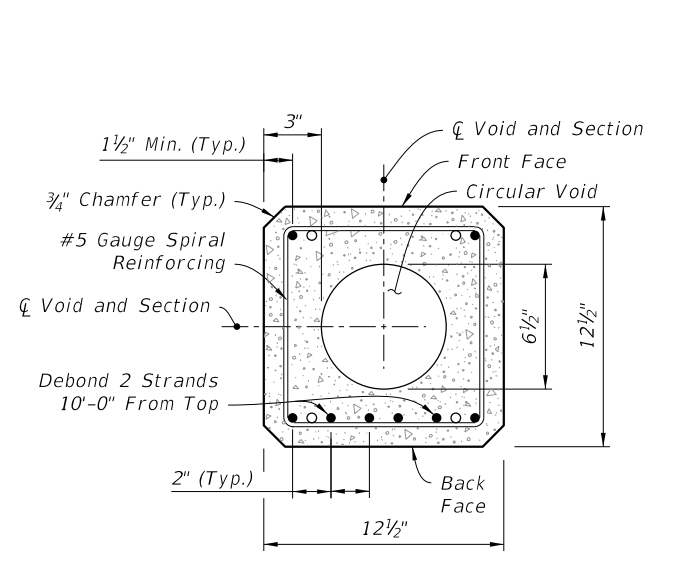
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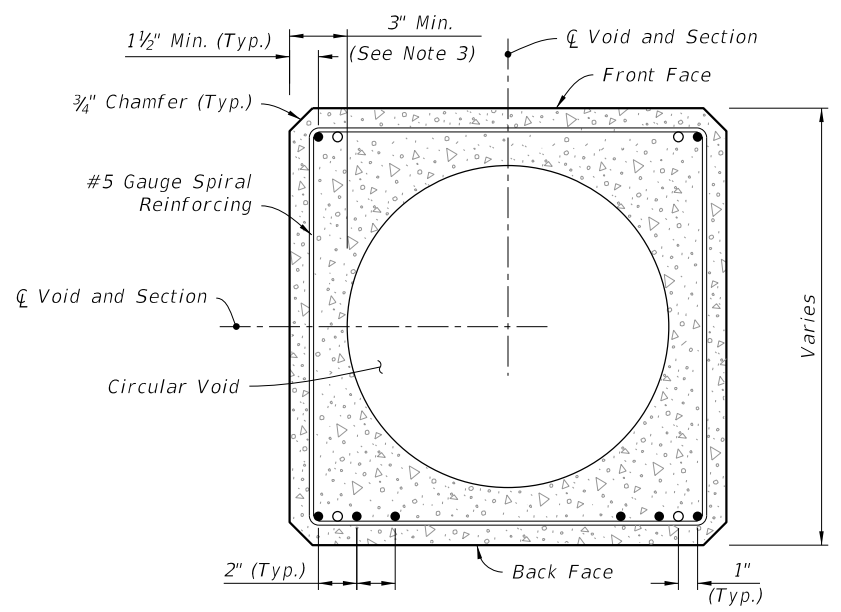
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(Strands, Holes, and Fixtures Not Shown)



**POLE ELEVATION**  
(Strands And Reinforcing Not Shown)



**SECTION M-M (Tip End)**



**SECTION N-N (Typical Square Section)**

**NOTES:**

1. Provide a minimum 3" concrete plug at the Tip End.
2. For final erection, tilt pole upright with single point attachment located a distance of 10% L from the Tip End.
3. Dimension may vary from 3" to 4 1/4" to accommodate smaller radius of optional stepped (PVC) void. The minimum void diameter is 6 1/2".
4. Strands shown are continuous from Tip End to Butt End.
5. Strands are not shown in the elevation views for clarity.

**LEGEND:**

- Prestressed Strand:  
0.5 in. ~ 31 kips before transfer (8 strands total)
- Dormant Strand:  
0.5 in. (4 strands total) One 24" splice allowed per strand

Renumbered  
**STRAIN POLE TYPE P-VI**

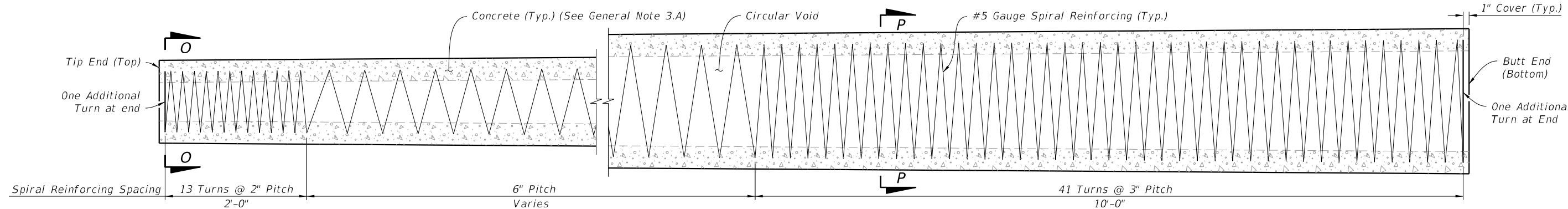
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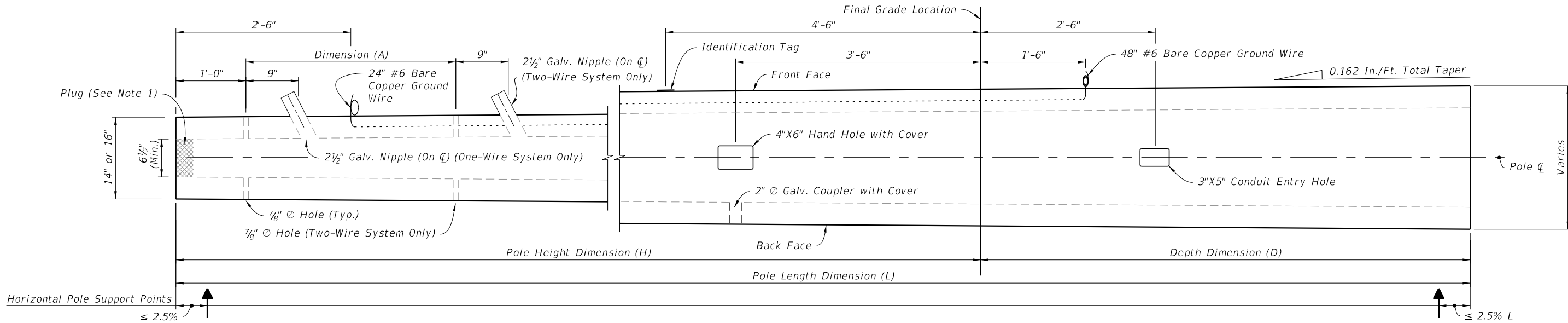
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CONCRETE POLES

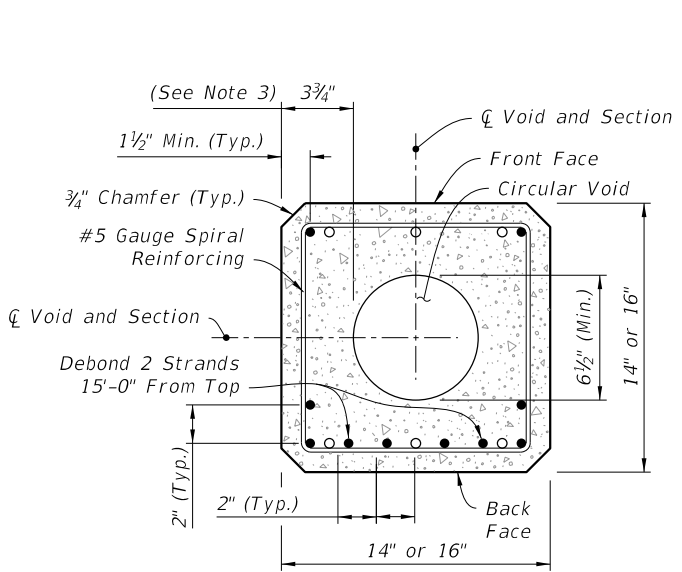
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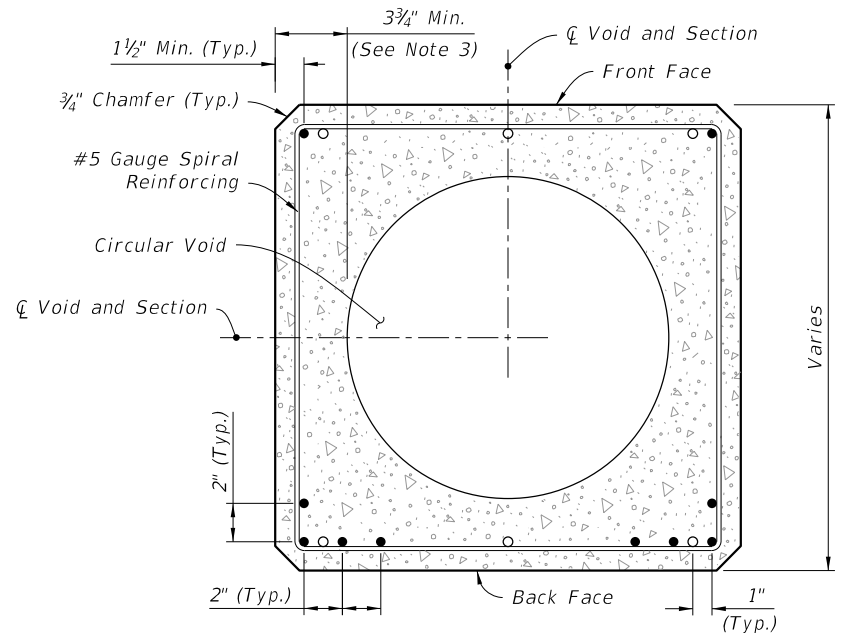
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(Strands, Holes, and Fixtures Not Shown)



**POLE ELEVATION**  
(Strands And Reinforcing Not Shown)



**SECTION O-O (Tip End)**



**SECTION P-P (Typical Square Section)**

**NOTES:**

1. Provide a minimum 3" concrete plug at the Tip End.
2. For final erection, tilt pole upright with single point attachment located a distance of 10% L from the Tip End.
3. Dimension may vary from 3 3/4" to 5" to accommodate smaller radius of optional stepped (PVC) void. The minimum void diameter is 6 1/2".
4. Strands shown are continuous from Tip End to Butt End.
5. Strands are not shown in the elevation views for clarity.

**LEGEND:**

- Prestressed Strand:  
0.5 in. ~ 31 kips before transfer (10 strands total)
- Dormant Strand:  
0.5 in. (6 strands total) One 24" splice allowed per strand

Renumbered

**STRAIN POLE TYPE P-VII**

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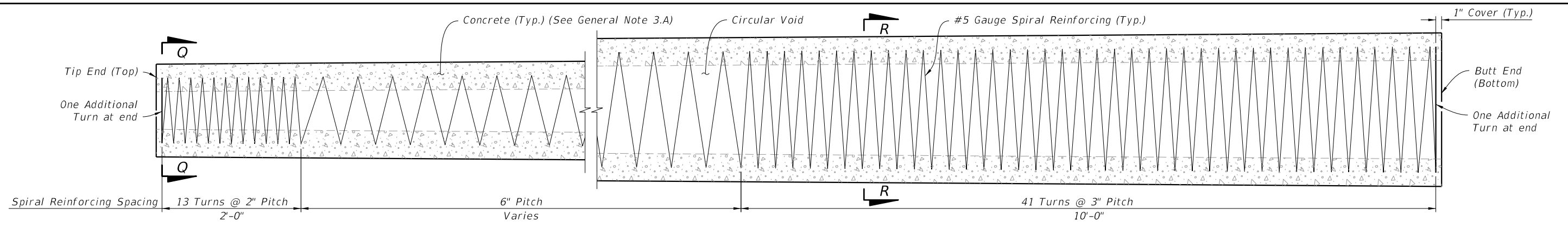
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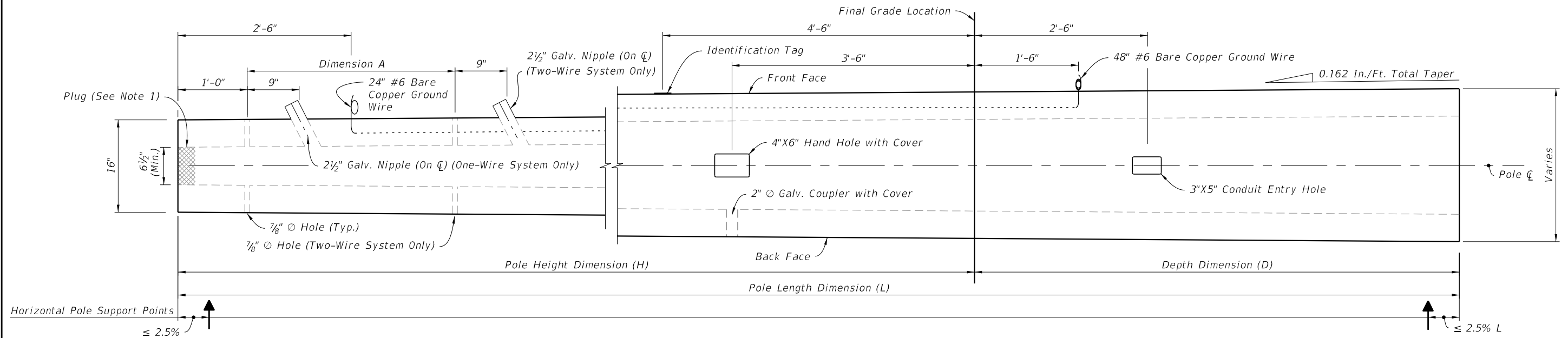
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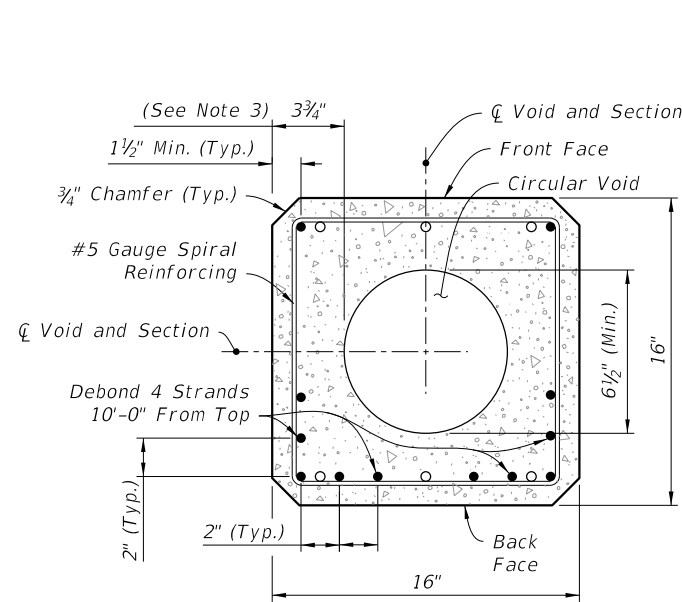
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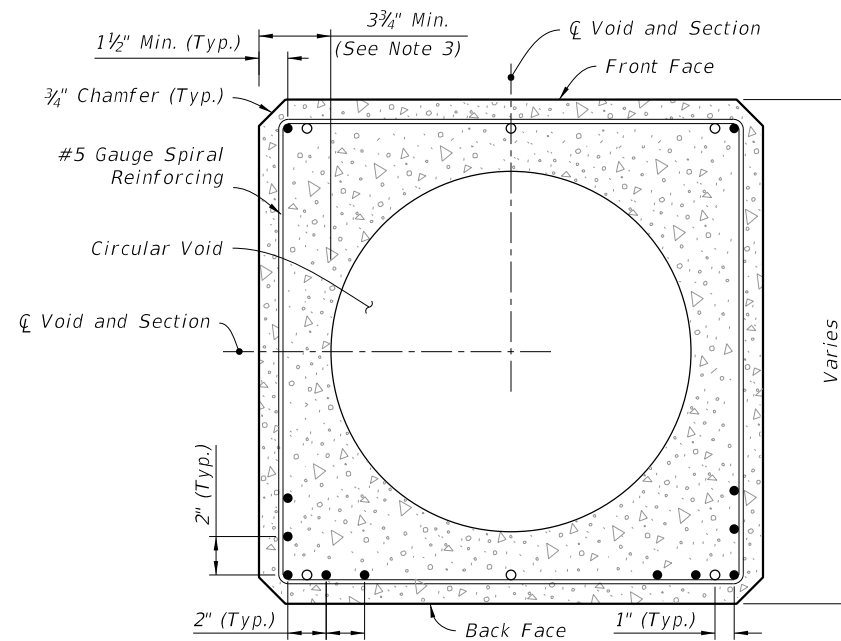
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(Strands, Holes, and Fixtures Not Shown)



**POLE ELEVATION**  
(Strands And Reinforcing Not Shown)



**SECTION Q-Q (Tip End)**



**SECTION R-R (Typical Square Section)**

**NOTES:**

1. Provide a minimum 3" concrete plug at the Tip End.
2. For final erection, tilt pole upright with single point attachment located a distance of 10% L from the Tip End.
3. Dimension may vary from 3 3/4" to 5" to accommodate smaller radius of optional stepped (PVC) void. The minimum void diameter is 6 1/2".
4. Strands shown are continuous from Tip End to Butt End.
5. Strands are not shown in the elevation views for clarity.

**LEGEND:**

- Prestressed Strand:  
0.5 in. ~ 31 kips before transfer (12 strands total)
- Dormant Strand:  
0.5 in. (6 strands total) One 24" splice allowed per strand

**Renumbered**  
**STRAIN POLE TYPE P-VIII**

9/22/2021 11:15:45 AM

LAST REVISION	DESCRIPTION:
<del>11/01/21</del>	11/01/22



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CONCRETE POLES

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**GENERAL NOTES:**

1. Work these Index Sheets with the Strain Pole Schedule in the Plans. See Index 634-001 for corresponding signal cable and span wire installation details.

2. Shop Drawings:

This Index is considered fully detailed and no shop drawing are necessary. Submit shop drawings only for minor modifications not detailed in the Plans.

3. Materials:

- A. Concrete: Class V with 4 ksi minimum strength at transfer or Class VI with 6.5 ksi minimum strength at transfer
- B. Prestress Strands & Spiral Reinforcing: Specification 641
- C. Hand and coupler cover plates: Non-corrosive material
- D. Screws: Round headed, chrome plated

4. Fabrication:

- A. Pole Total Taper shown is for pole width, strands, reinforcing and void (0.081 in/ft per face).
- B. Concrete Cover: 1" minimum.
- C. Spiral Reinforcing: Place as shown, and add one turn for splices and two turns at both the tip and butt ends of the pole.
- D. The design dimensions for Front Face (FF) and Back Face (BF) of the poles may vary transversely from the section shown by  $\pm 1/4"$  to assist with removal from forms. Balance addition and subtraction of the face widths to maintain section areas shown.
- E. Tie ground wires to the interior of reinforcing steel to prevent displacement during concreting operations.
- F. Cut the tip end of the prestressed strand either first or simultaneously with the butt end.
- G. Provide cover plates and screws for hand hole and couplers. Attach cover plates to the poles using lead anchors or embedded threaded inserts.
- H. Provide Aluminum Identification Tag on the pole with the following information:
  - a. Financial Project ID.
  - b. Pole Manufacturer
  - c. Standard Pole Type Number
  - d. Pole Length (L)

5. Support Points:

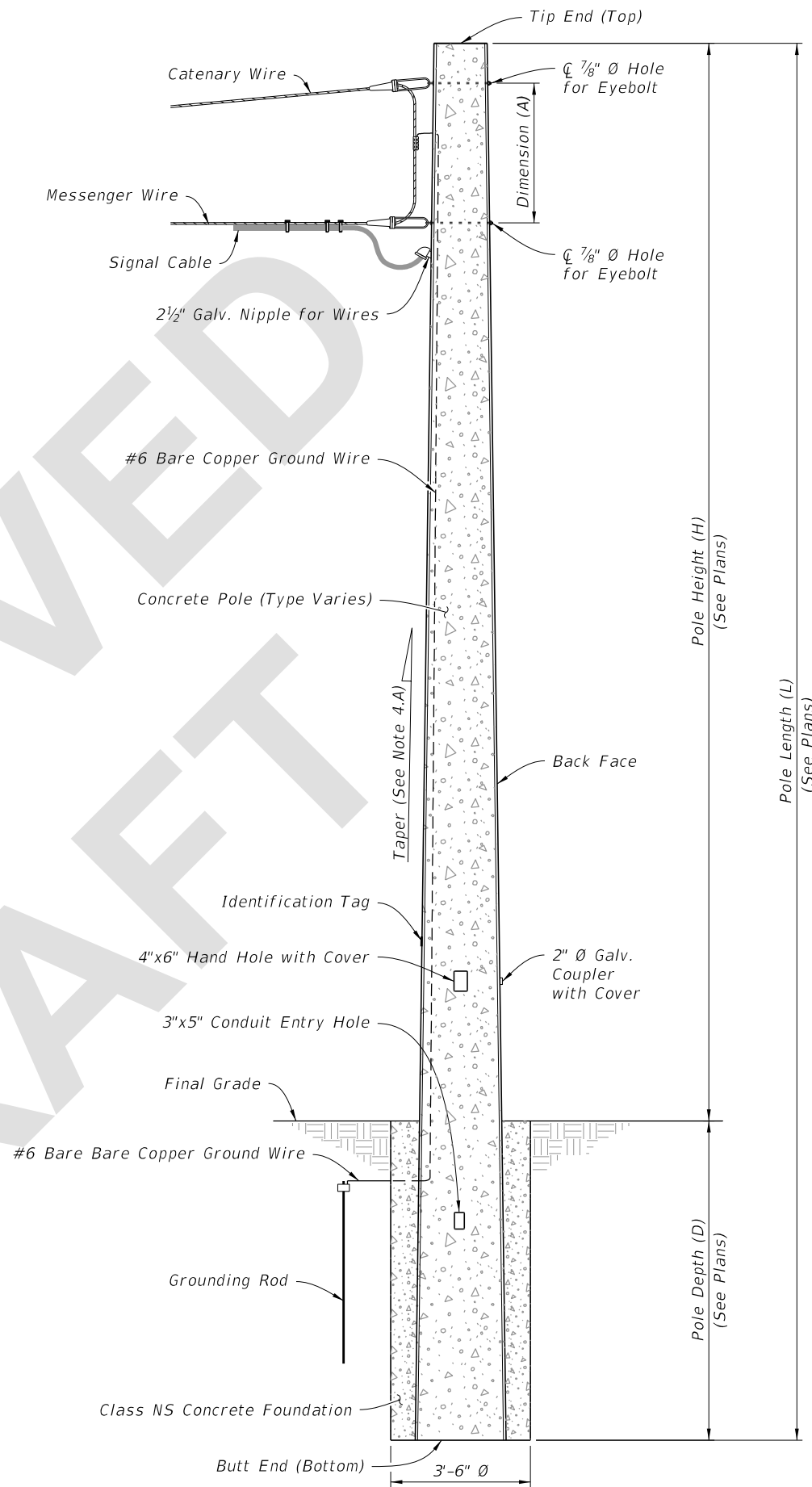
Support Points shown may vary within a tolerance of  $\pm 3"$ .

Horizontal Pole Support Points shown are for strand release, storage, handling and transport of the horizontal pole. Keep Back Face oriented downward until final erection.

6. Two point attachment: Provide an eye bolt for the messenger wire.

7. Tether Wire: When required, field-drill the eyebolt hole prior to installation.

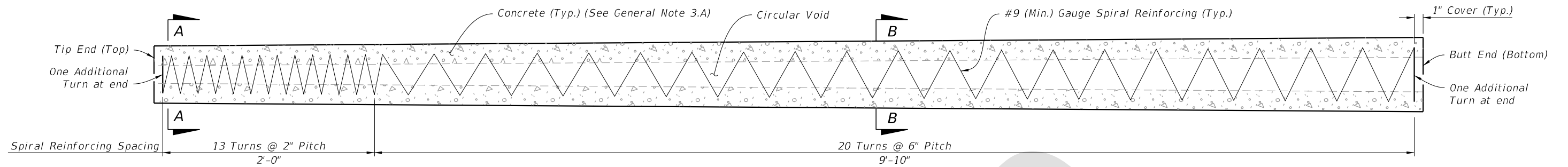
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1	General Notes and Contents
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3	Service Pole - Type P-IIB (36 Ft.)
4	Pedestal Pole - Type P-IIC (12 Ft.)
5	Pedestal Pole - Type P-IID (16 Ft.)
6	Pole - Type P-III
7	Strain Pole - Type P-IV
8	Strain Pole - Type P-V
9	Strain Pole - Type P-VI
10	Strain Pole - Type P-VII
11	Strain Pole - Type P-VIII



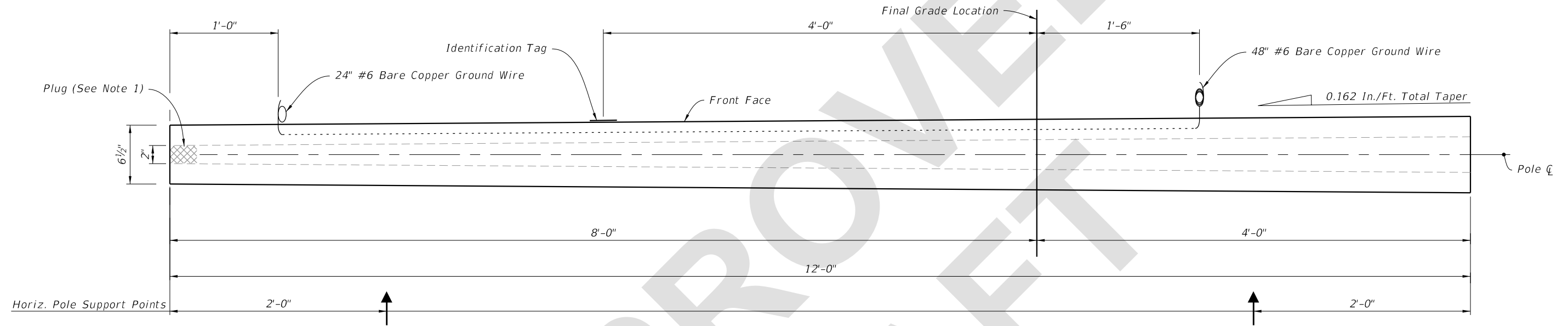
**CONCRETE POLE ASSEMBLY**  
(Type P-VII Shown, Others Similar)

APPROVED DRAFT

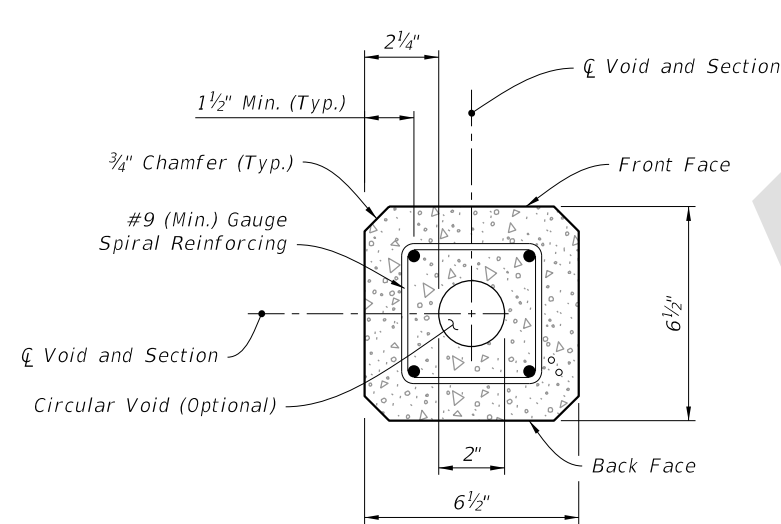
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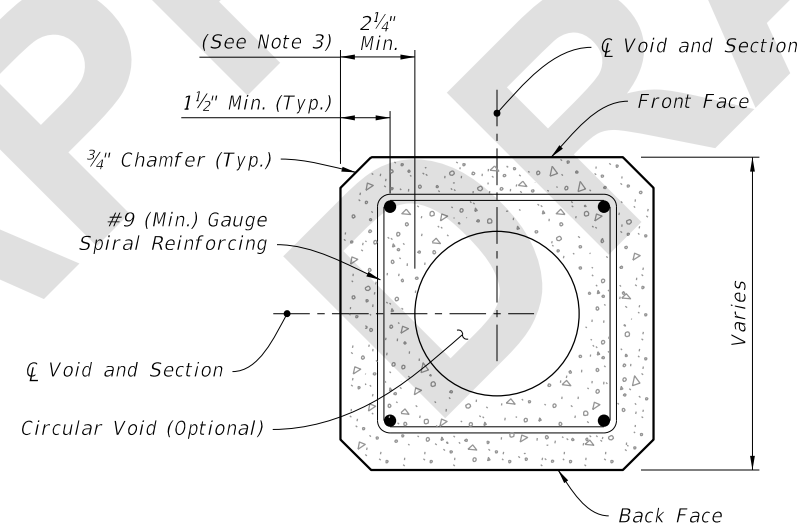
**SPIRAL REINFORCING ELEVATION**  
(Strands and Fixtures Not Shown)



**POLE ELEVATION**  
(Strands and Reinforcing Not Shown)



**SECTION A-A - (Tip End)**



**SECTION B-B (Typical Square Section)**

**NOTES:**


1. Provide a minimum 3" concrete plug at the Tip End.
2. For final erection, tilt pole upright with single point attachment located a distance of 4 feet from the Tip End.
3. Dimension may vary from 2 1/4" to 3 1/2" to accommodate smaller radius of optional stepped (PVC) void. The minimum void diameter is 2".
4. Strands shown are continuous from Tip End to Butt End.
5. Strands are not shown in the elevation views for clarity.

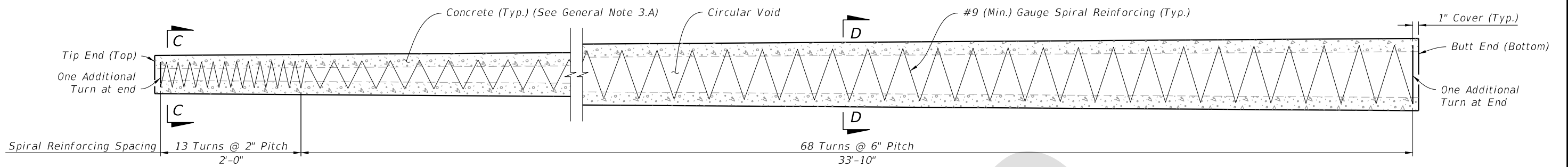
**LEGEND:**

- Prestressed Strand:  
0.5 in. ~ 24 kips before transfer or  
0.375 in. ~ 14 kips before transfer (4 strands total)

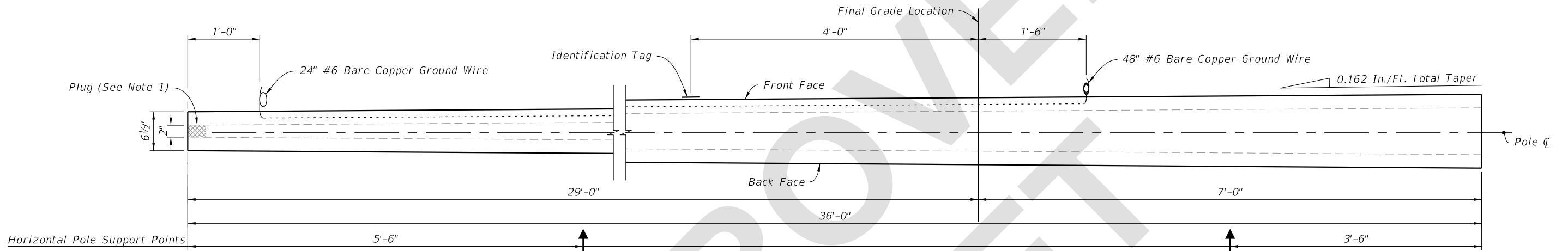
**SERVICE POLE - TYPE P-IIA (12 Ft.)**

8/23/2022 10:32:11 AM

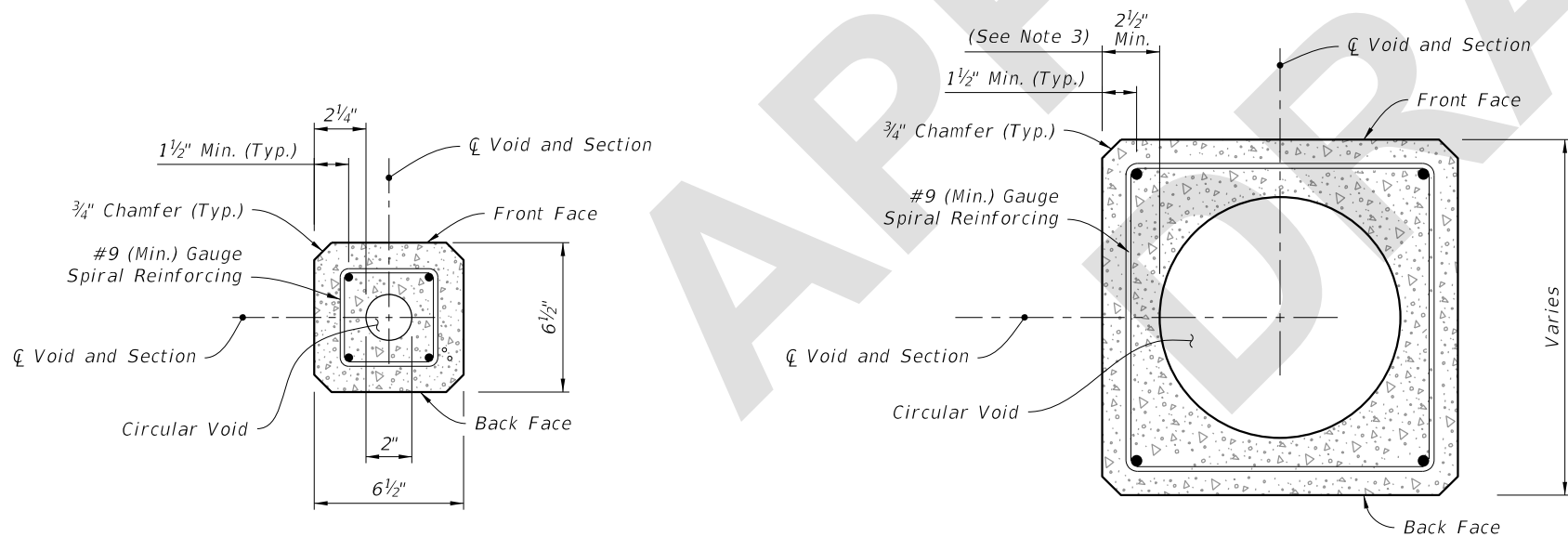
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**SPIRAL REINFORCING ELEVATION**  
(Strands and Fixtures Not Shown)



**POLE ELEVATION**  
(Strands and Reinforcing Not Shown)



**SECTION C-C (Tip End)**

**SECTION D-D (Typical Square Section)**

**NOTES:**


1. Provide a minimum 3" concrete plug at the Tip End.
2. For final erection, tilt pole upright with single point attachment located a distance of 10 feet from the Tip End.
3. Dimension may vary from 2 1/4" to 3 1/2" to accommodate smaller radius of optional stepped (PVC) void. The minimum void diameter is 2".
4. Strands shown are continuous from Tip End to Butt End.
5. Strands are not shown in the elevation views for clarity.

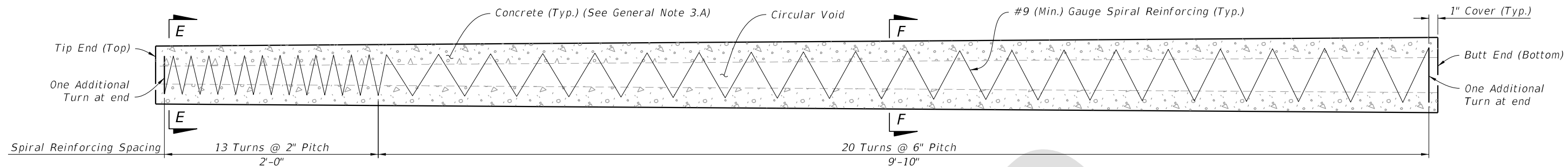
**LEGEND:**

- Prestressed Strand:  
0.5 in. ~ 24 kips before transfer or  
0.375 in. ~ 14 kips before transfer  
(4 strands total)

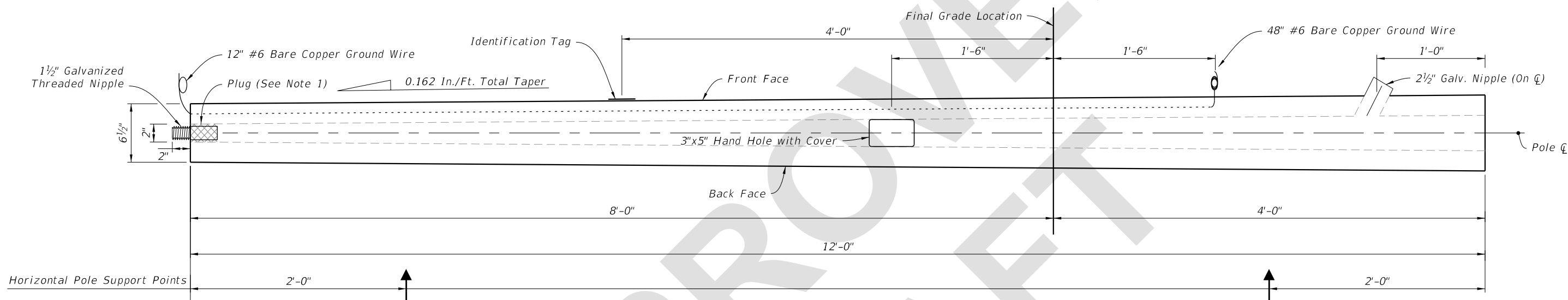
**SERVICE POLE TYPE P-IIB (36 Ft.)**

8/23/2022 10:32:12 AM

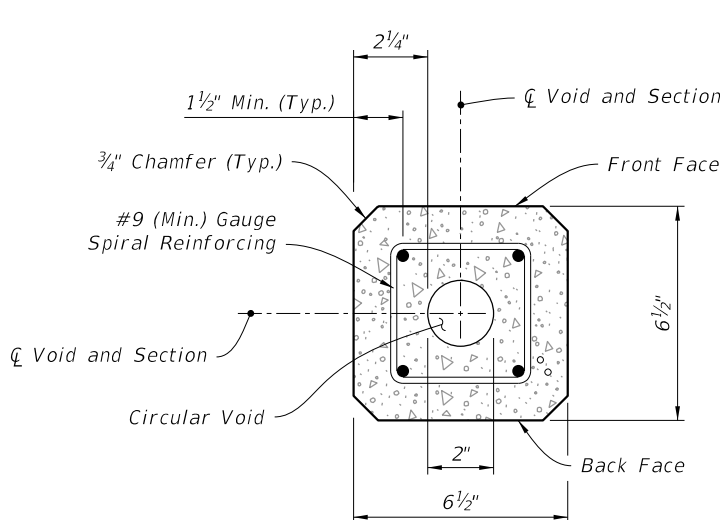
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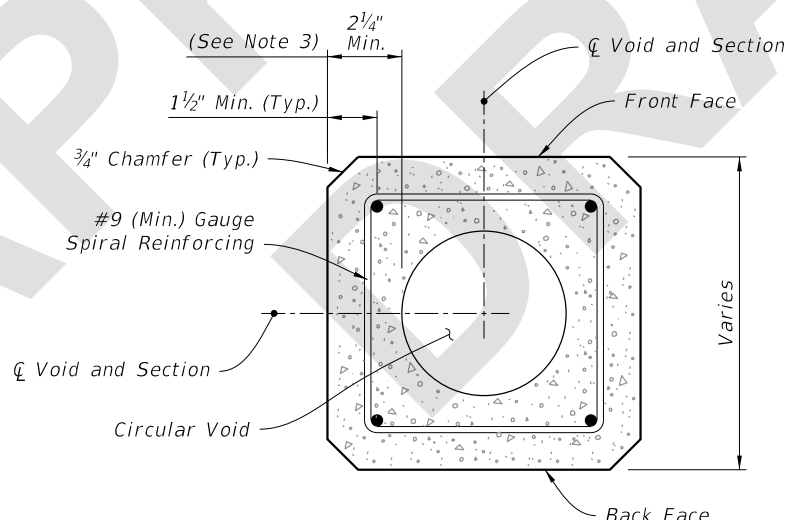
**SPIRAL REINFORCING ELEVATION**  
(Strands, Holes, and Fixtures Not Shown)



**POLE ELEVATION**  
(Strands and Reinforcing Not Shown)



**SECTION E-E (Tip End)**



**SECTION F-F (Typical Square Section)**

**NOTES:**

1. Provide a minimum 3" concrete plug at the Tip End.
2. For final erection, tilt pole upright with single point attachment located a distance of 4 feet from the Tip End.
3. Dimension may vary from 2 1/4" to 3 1/2" to accommodate smaller radius of optional stepped (PVC) void. The minimum void diameter is 2".
4. Strands shown are continuous from Tip End to Butt End.
5. Strands are not shown in the elevation views for clarity.

**LEGEND:**

- Prestressed Strand:  
0.5 in. ~ 24 kips before transfer or  
0.375 in. ~ 14 kips before transfer  
(4 strands total)

**PEDESTAL - TYPE P-IIC (12 Ft.)**

8/23/2022 10:32:13 AM

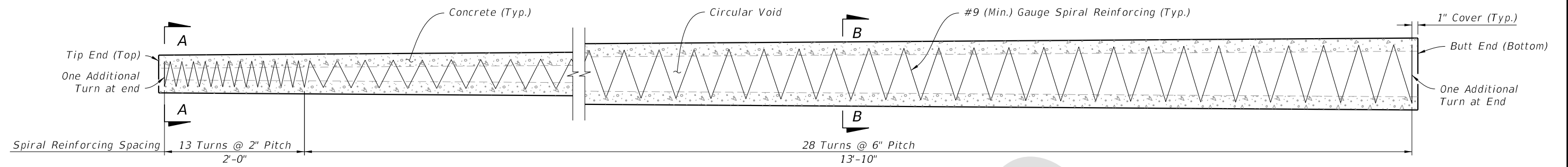
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**FY 2023-24  
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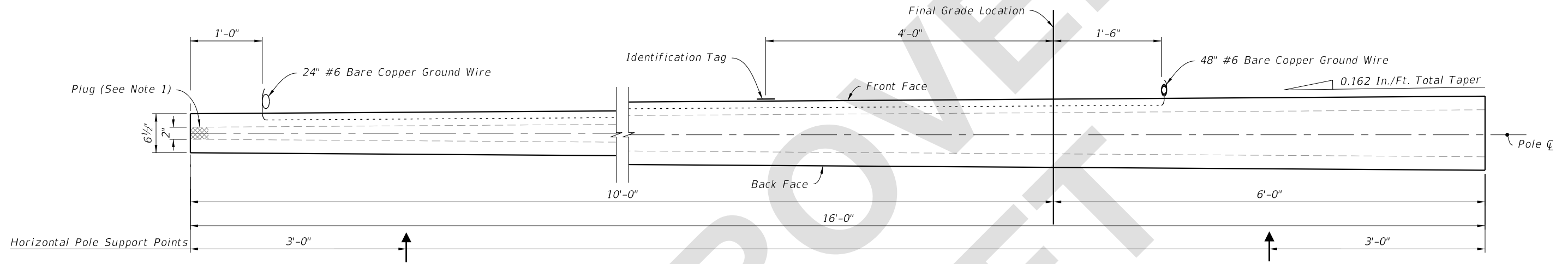
CONCRETE POLES

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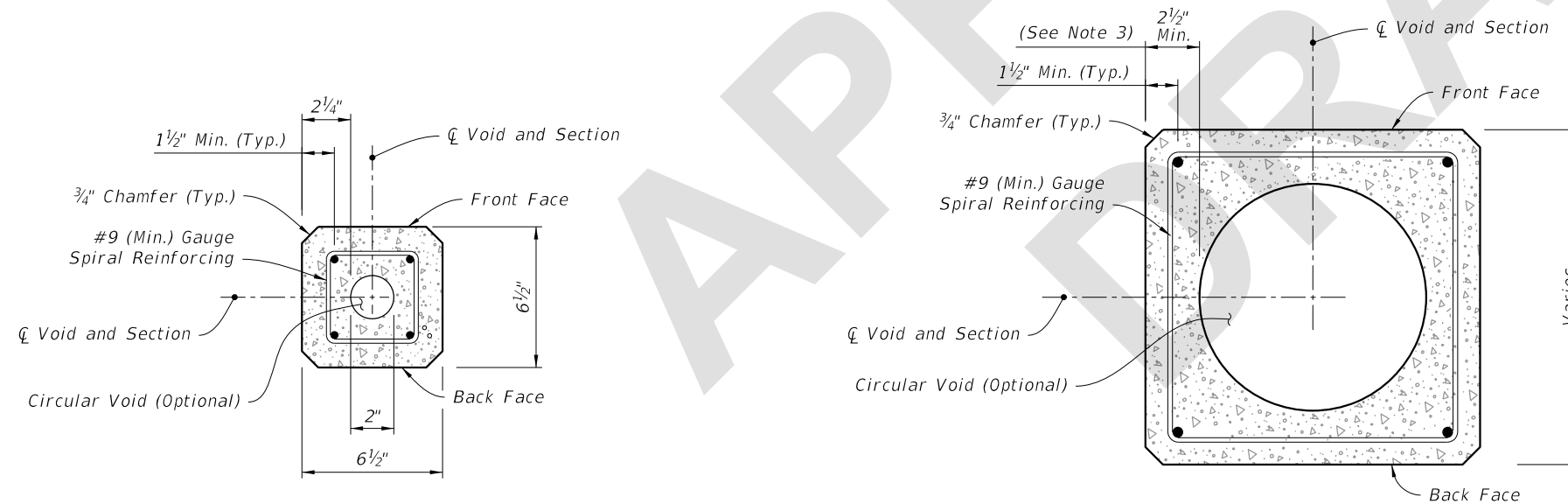




**SPIRAL REINFORCING ELEVATION**  
(Strands and Fixtures Not Shown)



**POLE ELEVATION**  
(Strands and Reinforcing Not Shown)



**SECTION A-A (Tip End)**

**SECTION B-B (Typical Square Section)**

**NOTES:**

1. Provide a minimum 3" concrete plug at the Tip End.
2. For final erection, tilt pole upright with single point attachment located a distance of 5 feet from the Tip End.
3. Dimension may vary from 2 1/4" to 3 1/2" to accommodate smaller radius of optional stepped (PVC) void. The minimum void diameter is 2".
4. Strands shown are continuous from Tip End to Butt End.
5. Strands are not shown in the elevation views for clarity.

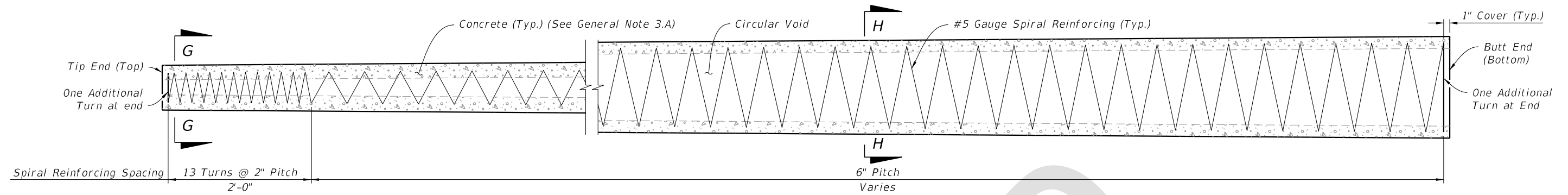
**LEGEND:**

- Prestressed Strand:  
0.5 in. ~ 24 kips before transfer or  
0.375 in. ~ 14 kips before transfer  
(4 strands total)

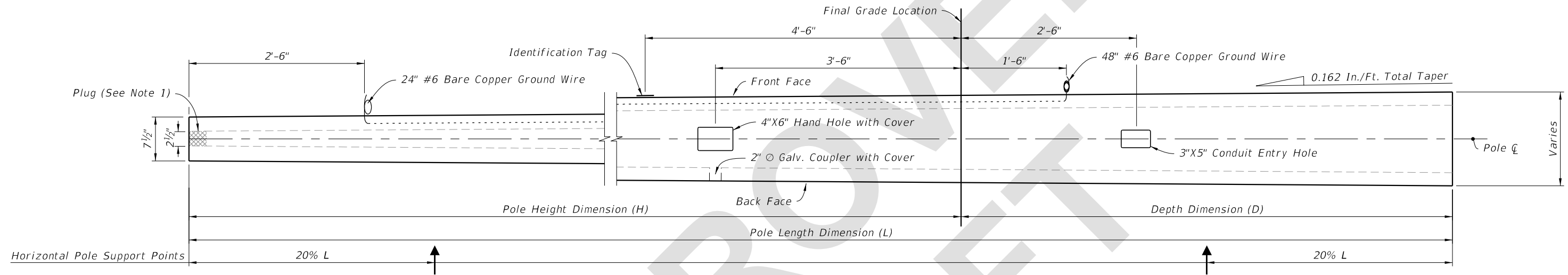
**SERVICE POLE TYPE P-IID (16 Ft.)**

8/23/2022 10:32:14 AM

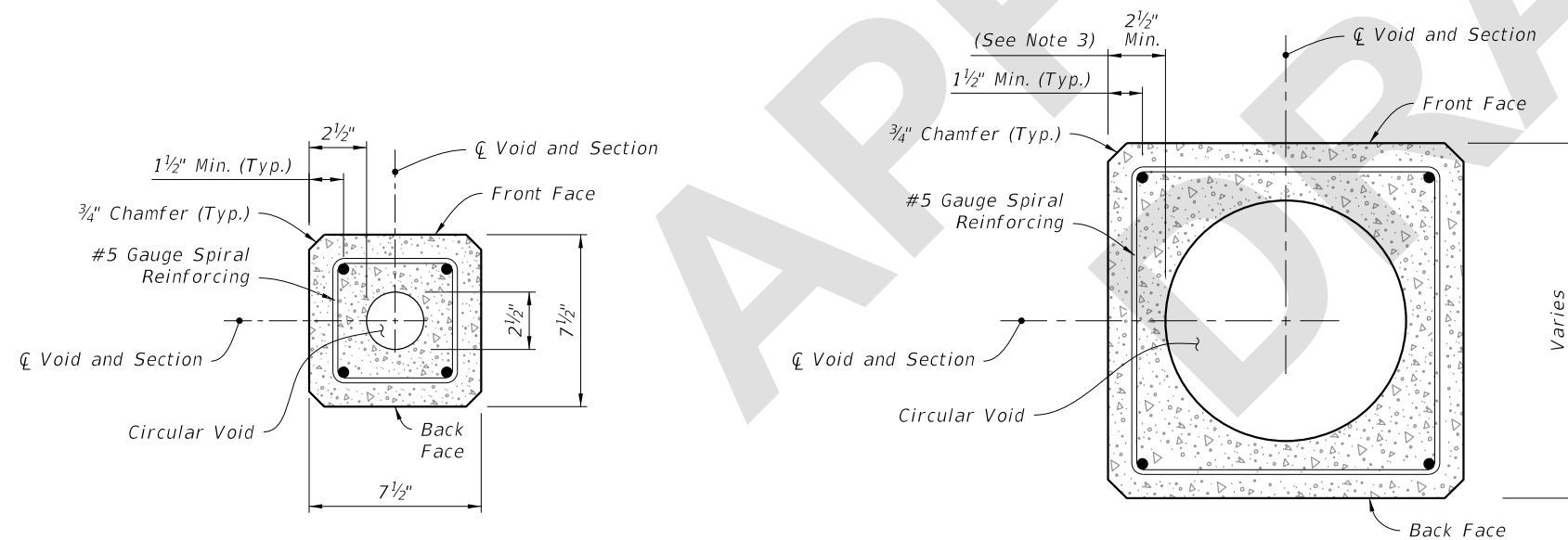
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**SPIRAL REINFORCING ELEVATION**  
(Strands, Holes and Fixtures Not Shown)



**POLE ELEVATION**  
(Strands and Reinforcing Not Shown)



**SECTION G-G (Tip End)**

**SECTION H-H (Typical Square Section)**

**NOTES:**

1. Provide a minimum 3" concrete plug at the Tip End.
2. For final erection, tilt pole upright with single point attachment located a distance of 33% L from the Tip End.
3. Dimension may vary from 2 1/2" to 3 3/4" to accommodate smaller radius of optional stepped (PVC) void. The minimum void diameter is 2 1/2".
4. Strands shown are continuous from Tip End to Butt End.
5. Strands are not shown in the elevation views for clarity.

**LEGEND:**

- Prestressed Strand:  
0.5 in. ~ 31 kips before transfer (4 strands total)

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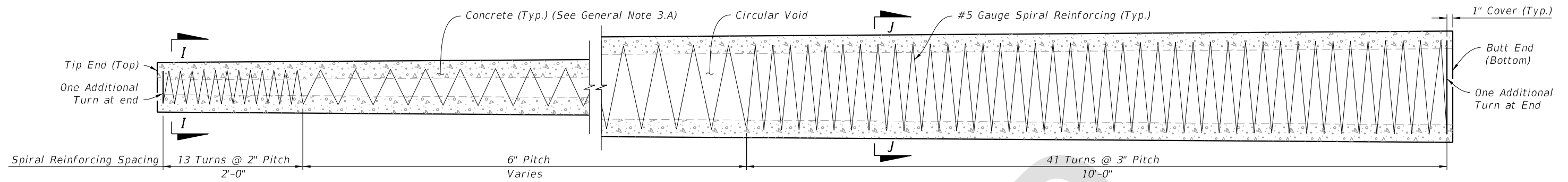


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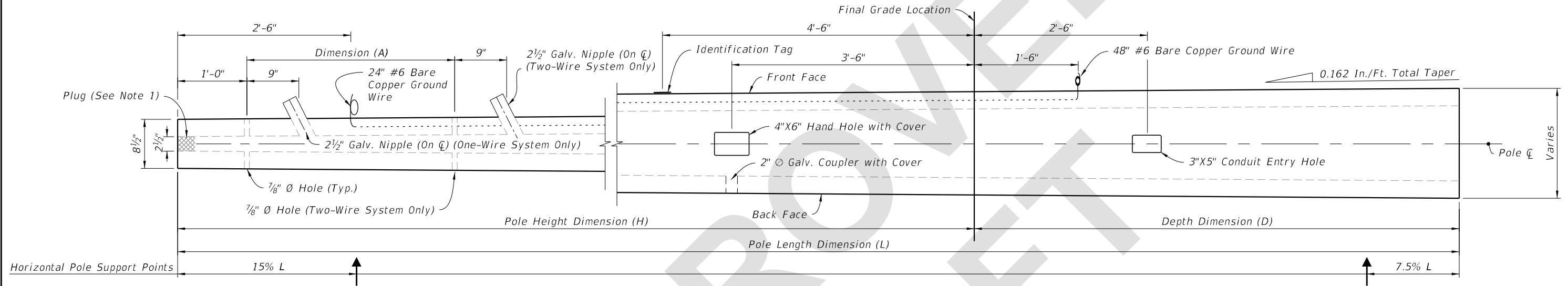
CONCRETE POLES

POLE TYPE P-III

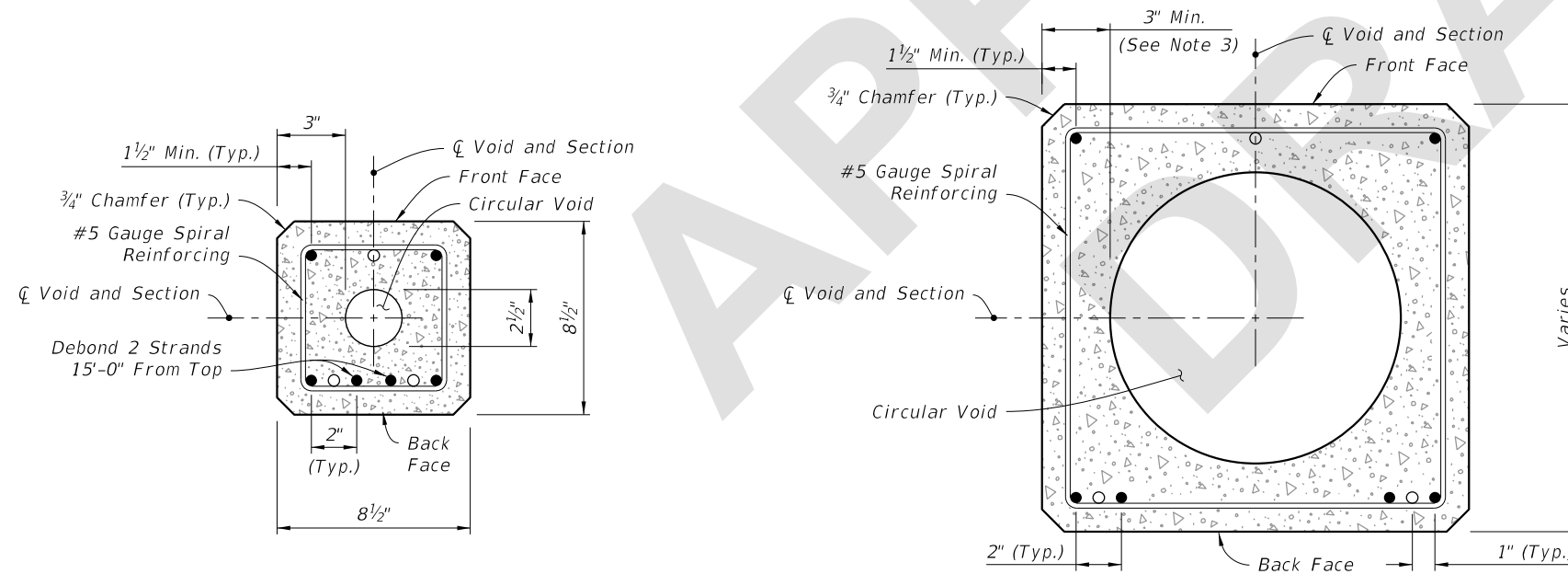
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**SPIRAL REINFORCING ELEVATION**  
(Strands, Holes and Fixtures Not Shown)



**POLE ELEVATION**  
(Strands and Reinforcing Not Shown)



**SECTION I-I (Tip End)**

**SECTION J-J (Typical Square Section)**


**NOTES:**

1. Provide a minimum 3" concrete plug at the Tip End.
2. For final erection, tilt pole upright with single point attachment located a distance of 20% L from the Tip End.
3. Dimension may vary from 3" to 4 1/4" to accommodate smaller radius of optional stepped (PVC) void. The minimum void diameter is 2 1/2".
4. Strands shown are continuous from Tip End to Butt End.
5. Strands are not shown in the elevation views for clarity.

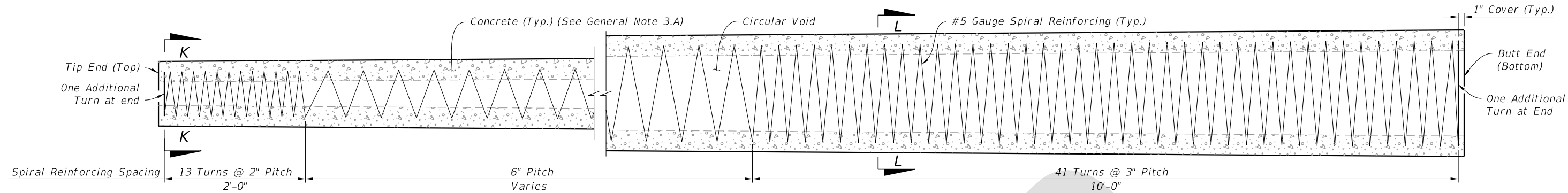
**LEGEND:**

- Prestressed Strand:  
0.5 in. ~ 31 kips before transfer (6 strands total)
- Dormant Strand:  
0.5 in. (3 strands total) One 24" splice allowed per strand

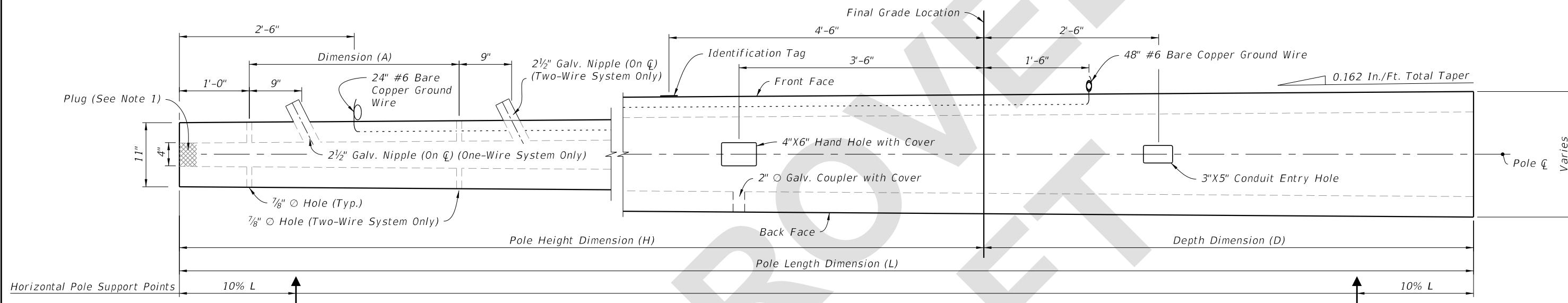
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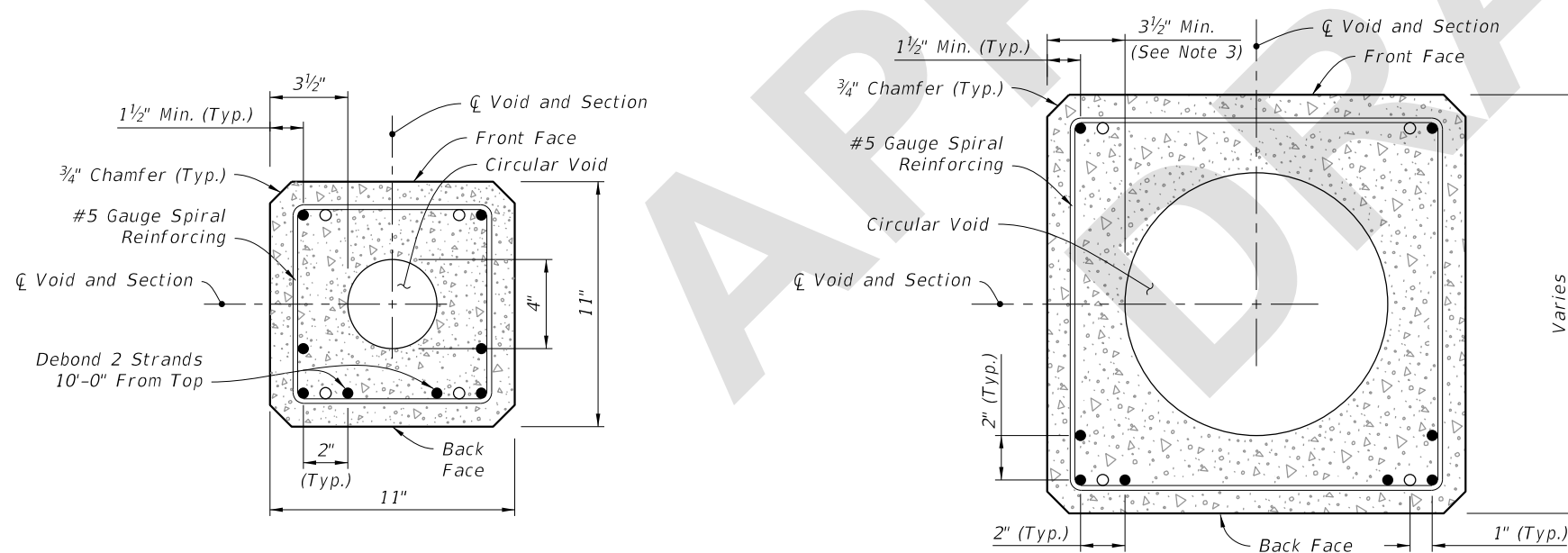
**STRAIN POLE TYPE P-IV**



**SPIRAL REINFORCING ELEVATION**  
(Strands, Holes, and Fixtures Not Shown)



**POLE ELEVATION**  
(Strands and Reinforcing Not Shown)



**SECTION K-K (Tip End)**

**SECTION L-L (Typical Square Section)**

**NOTES:**

1. Provide a minimum 3" concrete plug at the Tip End.
2. For final erection, tilt pole upright with single point attachment located a distance of 12.5% L from the Tip End.
3. Dimension may vary from 3 1/2" to 4 3/4" to accommodate smaller radius of optional stepped (PVC) void. The minimum void diameter is 4".
4. Strands shown are continuous from Tip End to Butt End.
5. Strands are not shown in the elevation views for clarity.

**LEGEND:**

- Prestressed Strand:  
0.5 in. ~ 31 kips before transfer (8 strands total)
- Dormant Strand:  
0.5 in. (4 strands total) One 24" splice allowed per strand

**STRAIN POLE TYPE P-V**

8/23/2022 10:32:16 AM

LAST REVISION 11/01/22	DESCRIPTION:
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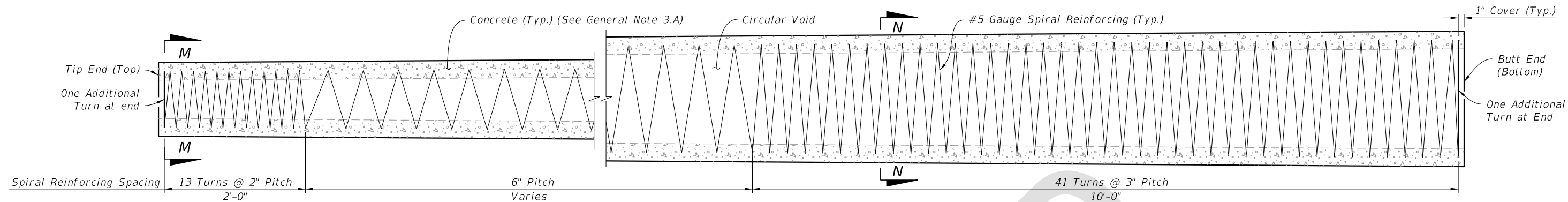


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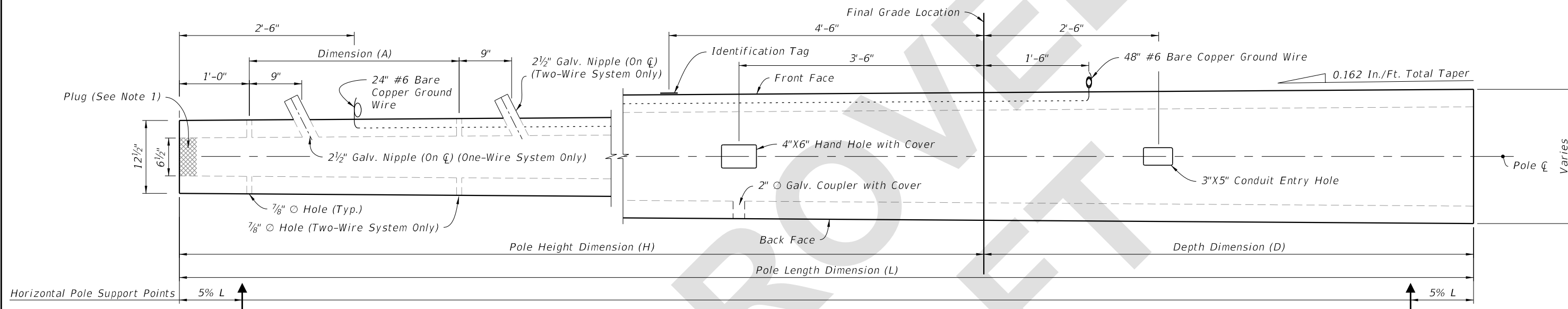
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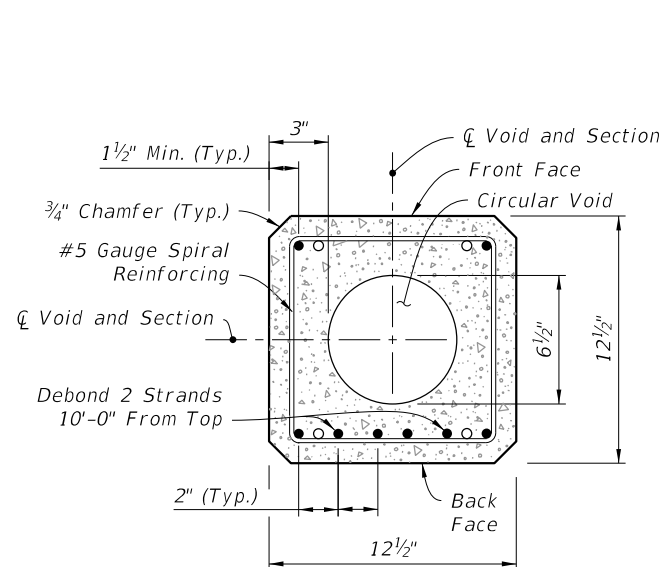
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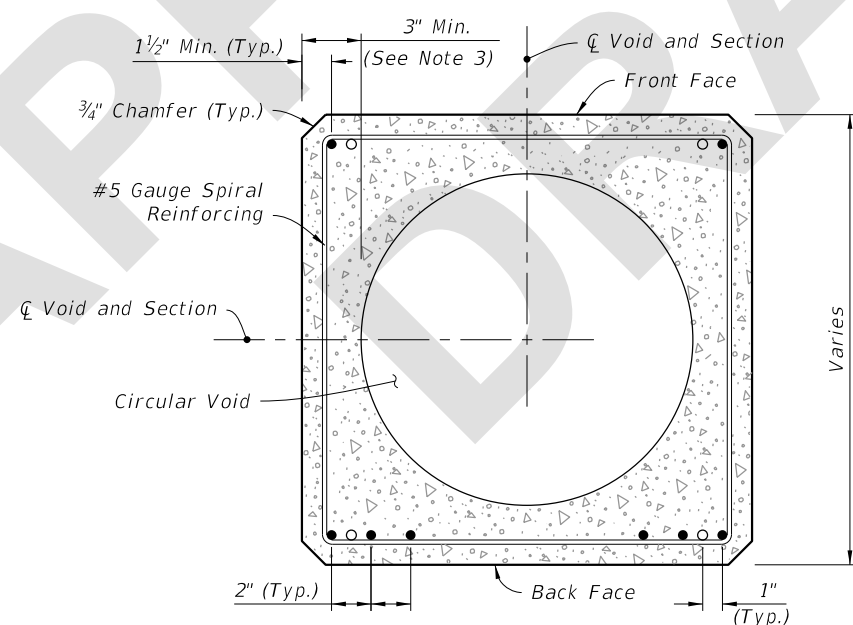
**SPIRAL REINFORCING ELEVATION**  
(Strands, Holes, and Fixtures Not Shown)



**POLE ELEVATION**  
(Strands And Reinforcing Not Shown)



**SECTION M-M (Tip End)**



**SECTION N-N (Typical Square Section)**

**NOTES:**

1. Provide a minimum 3" concrete plug at the Tip End.
2. For final erection, tilt pole upright with single point attachment located a distance of 10% L from the Tip End.
3. Dimension may vary from 3" to 4 1/4" to accommodate smaller radius of optional stepped (PVC) void. The minimum void diameter is 6 1/2".
4. Strands shown are continuous from Tip End to Butt End.
5. Strands are not shown in the elevation views for clarity.

**LEGEND:**

- Prestressed Strand:  
0.5 in. ~ 31 kips before transfer (8 strands total)
- Dormant Strand:  
0.5 in. (4 strands total) One 24" splice allowed per strand

**STRAIN POLE TYPE P-VI**

8/23/2022 10:32:17 AM

LAST REVISION 11/01/22	DESCRIPTION:
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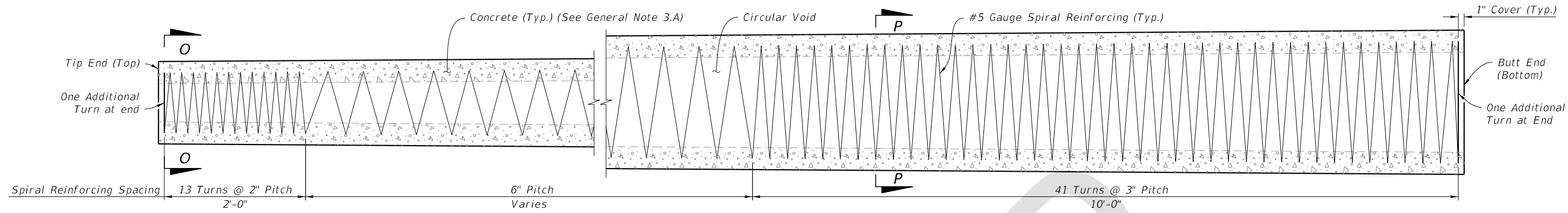


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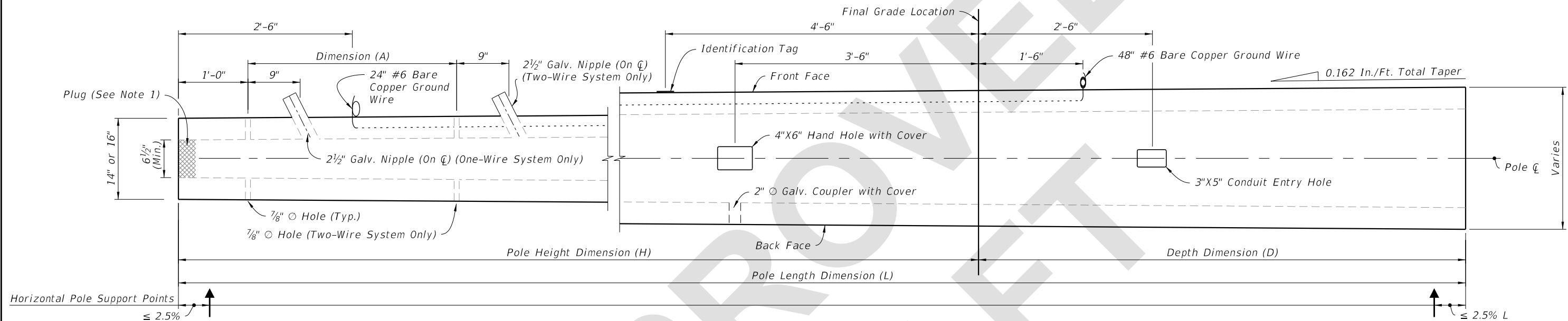
CONCRETE POLES

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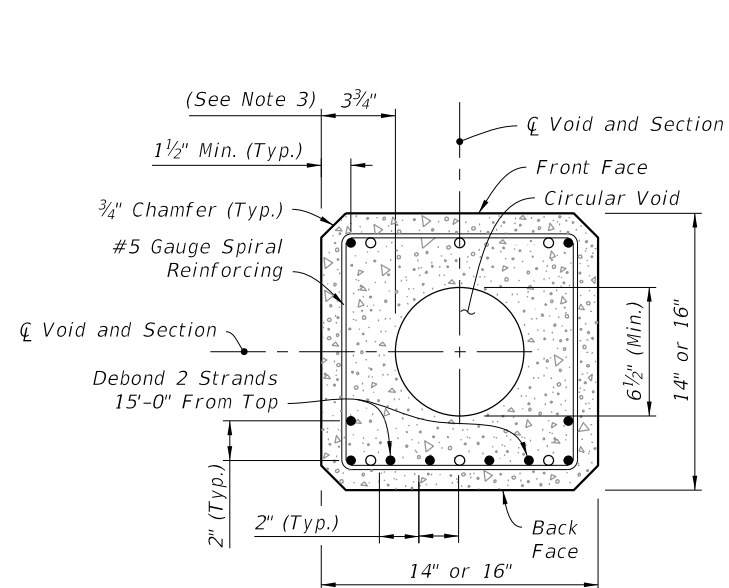
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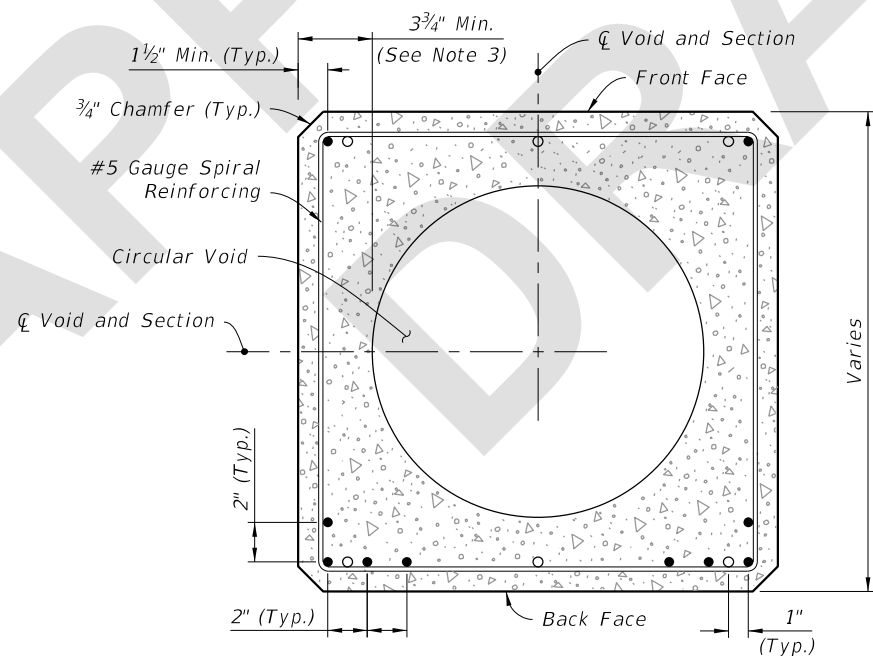
**SPIRAL REINFORCING ELEVATION**  
(Strands, Holes, and Fixtures Not Shown)



**POLE ELEVATION**  
(Strands And Reinforcing Not Shown)



**SECTION O-O (Tip End)**



**SECTION P-P (Typical Square Section)**

**NOTES:**

1. Provide a minimum 3" concrete plug at the Tip End.
2. For final erection, tilt pole upright with single point attachment located a distance of 10% L from the Tip End.
3. Dimension may vary from 3 3/4" to 5" to accommodate smaller radius of optional stepped (PVC) void. The minimum void diameter is 6 1/2".
4. Strands shown are continuous from Tip End to Butt End.
5. Strands are not shown in the elevation views for clarity.

**LEGEND:**

- Prestressed Strand:  
0.5 in. ~ 31 kips before transfer (10 strands total)
- Dormant Strand:  
0.5 in. (6 strands total) One 24" splice allowed per strand

**STRAIN POLE TYPE P-VII**

8/23/2022 10:32:18 AM

LAST REVISION 11/01/22	DESCRIPTION:
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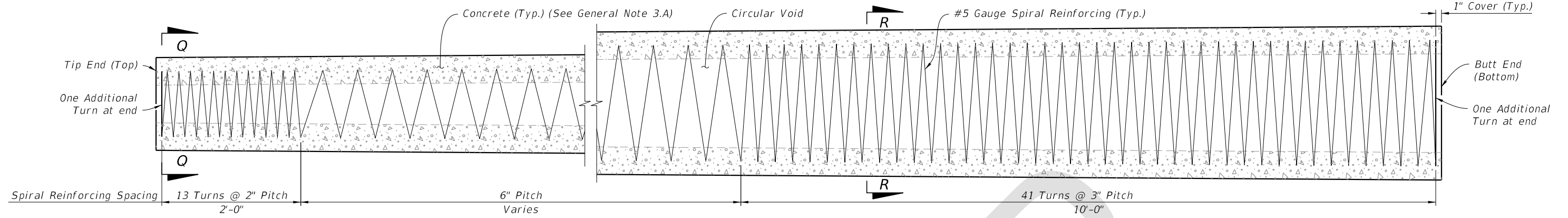


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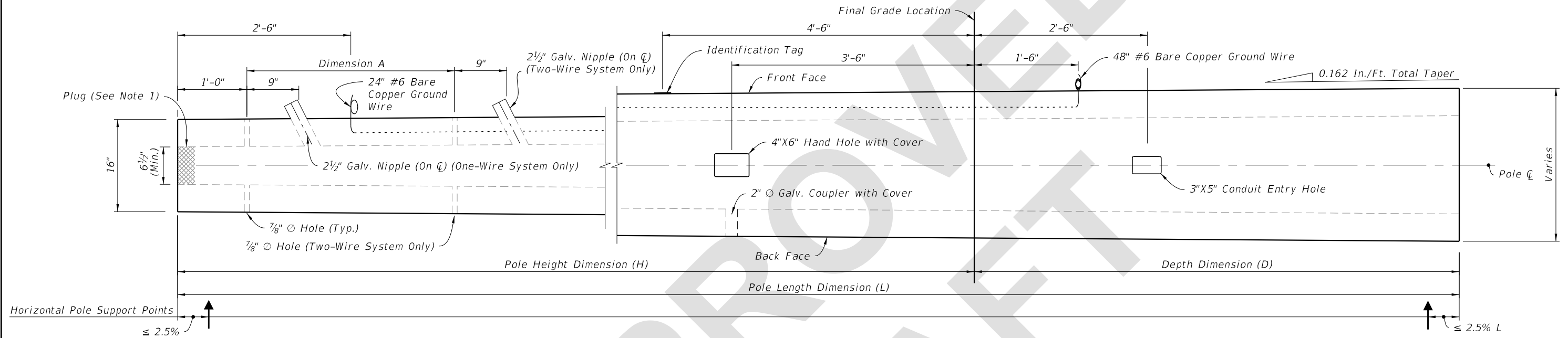
CONCRETE POLES

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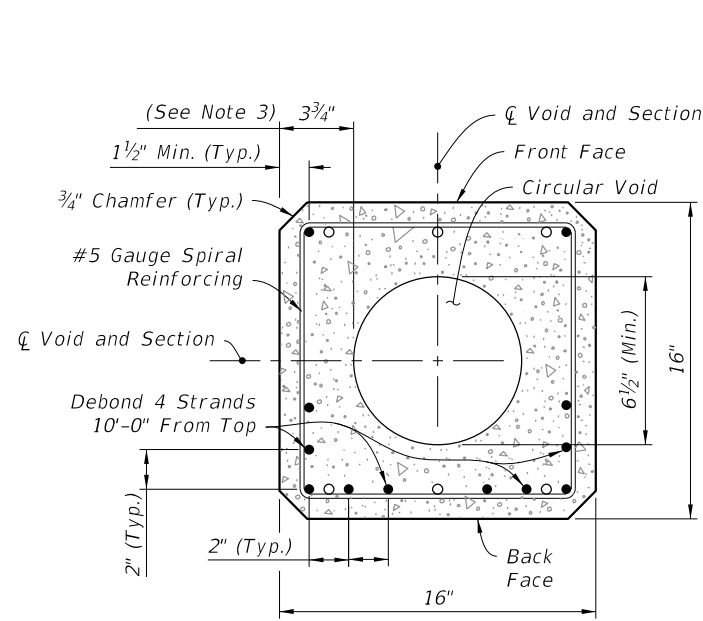
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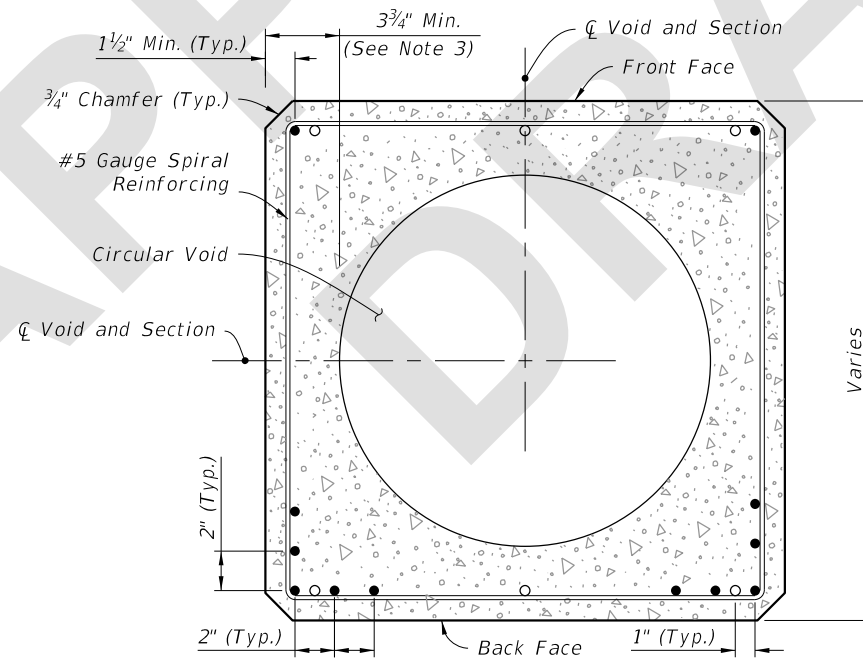
**SPIRAL REINFORCING ELEVATION**  
(Strands, Holes, and Fixtures Not Shown)



**POLE ELEVATION**  
(Strands And Reinforcing Not Shown)



**SECTION Q-Q (Tip End)**



**SECTION R-R (Typical Square Section)**

**NOTES:**

1. Provide a minimum 3" concrete plug at the Tip End.
2. For final erection, tilt pole upright with single point attachment located a distance of 10% L from the Tip End.
3. Dimension may vary from 3 3/4" to 5" to accommodate smaller radius of optional stepped (PVC) void. The minimum void diameter is 6 1/2".
4. Strands shown are continuous from Tip End to Butt End.
5. Strands are not shown in the elevation views for clarity.

**LEGEND:**

- Prestressed Strand:  
0.5 in. ~ 31 kips before transfer (12 strands total)
- Dormant Strand:  
0.5 in. (6 strands total) One 24" splice allowed per strand

**STRAIN POLE TYPE P-VIII**

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CONCRETE POLES

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